UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK
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UNITED STATES OF AMERICA, New York, N.Y.

v. 10 CR 162(KMW)

WESAM EL-HANAFI,

Defendant.

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January 7, 2015
10:17 a.m.

Before:

HON. KIMBA M. WOOD,

District Judge

APPEARANCES

PREET BHARARA
United States Attorney for the
Southern District of New York
BY: JOHN P. CRONAN
MICHAEL LOCKARD
Assistant United States Attorneys

SARAH KUNSTLER
REBECCA HEINEGG
Attorneys for Defendant

(In open court)

THE DEPUTY CLERK: Court calls the United States of America vs. Wesam El-Hanafi. Counsel, please state their appearances.

MR. LOCKARD: Good morning, your Honor. Michael Lockard and John Cronan for the government.

THE COURT: Good morning.

MS. KUNSTLER: Good morning, your Honor. Sarah Kunstler and Rebecca Heinegg for Mr. El-Hanafi.

THE COURT: Good morning.

Good morning, Mr. El-Hanafi.

We are here to hear medical testimony from two doctors. Did counsel have a preference for the order in which the doctors go? I think they would normally be the defense first?

MR. LOCKARD: That's fine. That's fine with the government.

Your Honor, we've also discussed with defense counsel not sequestering the witnesses so that each witness can hear the other doctor's testimony. And we think that's appropriate in this case, if the Court is --

THE COURT: That's very sensible. Then we're ready for the witness.

MS. KUNSTLER: All right. Your Honor, then the defense calls Dr. Jeffrey Weitz.

JEFFREY WEITZ,

called as a witness by the Defendant,

having been duly sworn, testified as follows:

THE COURT: You may examine.

THE WITNESS: Sorry?

THE COURT: That's the judge's way of telling a lawyer that she can get going with the questions.

THE WITNESS: I'm sorry. I can't hear you very well.

THE COURT: Okay. I'll speak louder. What I said was she may examine you now.

THE WITNESS: Okay. Thank you.

THE COURT: Let's all speak loud, right into the mic. Let me know if you can't hear anything.

MS. KUNSTLER: Thank you, your Honor.

One thing I wanted to mention is that we've also agreed with the government that we stipulate that these are experts. We may be asking them about their expertise, but that's only with respect to this particular area and as it relates to this case.

THE COURT: Yes. In other words, they are both experts in? You should state what they're experts in.

MS. KUNSTLER: That they're -- well, they're both experts in deep vein thrombosis or experts in hematology and vascular surgery, and they have practices specialized in those areas. They're slightly different areas of expertise, but

we'll be going over that.

THE COURT: Okay. Thank you.

DIRECT EXAMINATION

BY MS. KUNSTLER:

Q. Good morning.

A. Good morning.

Q. Can you -- you've already stated your name.

Could you briefly summarize your educational background for the Court.

A. Yes. I went to medical school at the University of Ottawa and graduated in 1976. And after clinical training in internal medicine, hematology and medical oncology, I came to New York City where I did my research training at Columbia University. And I was on the faculty from 1983 to 1986. And then I returned to Canada, and I assumed my current position at McMaster University.

Q. And what is your current title and positions?

A. Yes. I'm a professor of medicine and biochemistry at McMaster University. I'm vice chair for research for the department of medicine at McMaster University. And I'm executive director of the Thrombosis and Atherosclerosis Research Institute, which is an institute that employs about 150 people and does research that spans the spectrum from basic research to animal models to clinical trials and to knowledge translation in the area of thrombosis or abnormal clotting in

veins and arteries.

Q. And how many such institutes are there in the world?

A. I'm sorry?

Q. How many such institutes are there in the world, like the institute?

A. Oh, there aren't very many. I think we're the only institute like that in Canada. There is one in the UK and there are a couple in the United States.

Q. And can you summarize your board certifications with respect to your specialty in thrombosis.

THE COURT: I have -- I have in front of me his entire curriculum vitae. If there is anything you wish to highlight, you may, but I have reviewed the curriculum vitae.

MS. KUNSTLER: That's fine, then, your Honor.

Q. Can you tell us, what is deep vein thrombosis?

A. So deep vein thrombosis refers to a blood clot in a vein that's deep and somewhere in the body. These usually occur in the veins of a leg, but they can occur in the veins of the arm or, more rarely, in pretty much any vein in the body.

Q. And can you -- how many patients with DVT do you see in a year?

A. I don't know exactly how many I might see in a year, but in a typical day on call -- and I'm on call about one day a week -- I will see approximately 20 patients in that day who have deep vein thrombosis or a complication thereof. That's

just an approximation, so that's -- I see a lot of patients with deep vein thrombosis. That's what our area specializes in at McMaster University.

Q. So about 20 a week generally?

A. Yeah, about at least 20 a week.

Q. And how long have you been seeing patients or treating patients with DVT, for how many years?

A. Since the early 1980s.

Q. And at what stage of the disease do you generally get these patients?

A. I see patients at all stages; from the time when they're sent in with the possibility of deep vein thrombosis and they require diagnostic testing, to patients who have established diagnosis and are being asked questions about their management, to patients who have complications or possible recurrence. So I see the whole gamut of patients.

Q. And do you do clinical studies on patients with DVT?

A. Yes. I've been involved in many clinical studies in both prevention, diagnosis, treatment and knowledge translation.

Q. And have you written any peer-reviewed articles in the field?

A. I have.

Q. Do you have an approximation of how many?

A. I've written almost 400 peer-reviewed articles.

Q. And how many would relate directly to the field of

thrombosis?

A. Probably over 200.

Q. Now, I am going to show you what's been marked as Defendant's Exhibit A. And I believe everyone has copies of everything.

Now, have you seen that document before?

A. Yes.

Q. Have you seen the document before?

A. Yes, of course I have. Yes.

Q. And what is it?

A. This is a paper that was published last year on post-thrombotic syndrome. And this is a scientific statement that was published in circulation, and is part of the American Heart Association request for these types of statements.

THE COURT: The exhibits I've been handed are not marked, and there are many of them. It might be helpful if they were marked.

MS. HEINEGG: They are marked on the back of the exhibit, your Honor.

THE COURT: Oh, I see. It's not the usual spot, but okay.

MS. KUNSTLER: I apologize, your Honor. It should be the first exhibit in the pile. It's an article entitled The post-thrombotic Syndrome.

THE COURT: I have it.

MS. KUNSTLER: Okay.

BY MS. KUNSTLER:

Q. Now, did you have a role in drafting that statement?

A. I did. As part of the writing committee for this paper, we reviewed the literature on this topic, most of it coming within the last few years. We've prepared a draft. We generated and voted on the recommendations, and then the paper was submitted. It went through both an external peer review process, which required two rounds of corrections, and then an internal peer review process by the American Heart Association itself before it was published. And I was involved in all stages along the way.

Q. Thank you.

MS. KUNSTLER: Your Honor, I just wanted a point of clarification. I didn't know whether we're officially admitting exhibits or whether it's less formal and we're just identifying them as exhibits for identification purpose.

THE COURT: Well, let's see. To the extent that this was authored in part or in whole by Dr. Weitz, I think it should probably come in as an exhibit.

MS. KUNSTLER: Okay. I guess I'll ask, as we go through, I'll ask about each of my exhibits.

THE COURT: Okay.

BY MS. KUNSTLER:

Q. Now, we met before to discuss the care and treatment of my

client?

A. I met you for the first time yesterday. We have talked on the phone several times.

Q. And are you being compensated for your time in connection with this case?

A. I am.

Q. And can you tell me what your hourly rate is?

A. It's $500 per hour.

Q. And how many hours have you billed so far?

A. I think I've billed for 40 hours thus far.

Q. And have you been paid yet?

A. No.

Q. And are you being paid for your time here in New York?

A. I am.

Q. And how much are you being paid for that?

A. $5,000 a day.

Q. Now, is your rate here your standard rate that you charged us in this case?

A. No. It's not my standard rate. My standard rate is closer to $1,000 a day.

Q. You mean --

A. An hour. I'm sorry.

Q. Thank you.

Now, from your training and experience, generally are you familiar with the standards of care to which medical

practitioners are held regarding DVT treatment and diagnosis?

A. I am.

Q. And can you tell us whether that standard of care and treatment is relatively uniform throughout North America?

A. I would like to think that it is, yes.

Q. And from your training and experience, are you generally familiar with what is regarded as appropriate and reasonable medical care for DVT diagnosis and treatment?

A. I am.

Q. Now, have you reviewed materials in connection with this case?

A. Yes.

Q. Can you tell me what materials you've reviewed?

A. I reviewed documents from the Bureau of Prisons, hospital records, clinic notes, laboratory results, ultrasound reports, Mr. El-Hanafi's request for medical care and Dr. McKinsey's reports.

Q. And in preparation you've also reviewed medical literature generally about the condition?

A. Yes.

Q. And his treatment?

A. And I did review the pertinent medical literature in preparing my reports.

Q. And you examined Mr. El-Hanafi?

A. Yes. I've had an opportunity to meet with him yesterday

and to examine him.

Q. And what specifically were you asked to do? What was your role when you were retained for this case?

A. Well, I was asked to look at the facts in this case from a medical perspective and to give an opinion on what needs to be done medically and going forward in the care of Mr. El-Hanafi. And I was also asked to look at whether the standard of medical care that he received was adequate.

Q. And did you make those determinations?

A. I'm sorry?

Q. Did you do that?

A. Yes.

Q. And did you form an opinion about Mr. El-Hanafi's medical condition and needs going forward?

A. I did, yes.

Q. And what determination did you make about that condition and those needs?

A. Well, Mr. El-Hanafi had deep vein thrombosis that was quite extensive, and he now has what's called post-thrombotic syndrome, which is a chronic syndrome going forward. So he needs management for that. He also has risk factors for recurrent thrombosis, which include heterozygous for this congenital mutation, the factor five Leiden mutation, and he has antiphospholipid syndrome. And because of these risk factors he requires long-term anticoagulation therapy. He also

has hypertension that hasn't been particularly well controlled, and he has the start of some renal insufficiency, some kidney impairment that needs to be watched on a go-forward basis. So those are the conditions that we are dealing with right now.

Q. And what is post-thrombotic syndrome?

A. This is a sequel to deep vein thrombosis that occurs in up to 50 percent of the people who have extensive deep vein thrombosis. And it is a syndrome that's characterized by pain, swelling and discomfort in the limb that's worse with standing and is relieved with leg elevation.

Q. Now I am going to hand you what I've marked as Defense Exhibit B, which is also 3500-JW27, and Defense Exhibit B1.

THE COURT: Before you get to that, may I ask a question that follows on your prior question.

MS. KUNSTLER: Sure, certainly.

THE COURT: You said that his syndrome -- how do you spell that, post --

THE WITNESS: Thrombotic.

THE COURT: Thrombotic syndrome, causes him pain, swelling and discomfort, which is relieved by elevation of his leg and --

THE WITNESS: I'm sorry. I'm having trouble hearing you.

THE COURT: Oh, okay. I'll talk louder.

You testified that he now has pain, swelling and

discomfort, and that that is relieved by leg elevation and is exacerbated by standing. How about recreational movement? Does that exacerbate his pain and swelling and discomfort?

THE WITNESS: Absolutely, your Honor. And Mr. El-Hanafi told me that in his time that he gets for exercise, he's quite limited in what he can do. So, for example, if he tries to do even simple things, like squats, he has difficulty. And he's tried to jog, and he can't jog without getting very severe pain. So he's quite limited in his physical ability. And I recognize he doesn't have many opportunities, but even those opportunities that he has now are limited by the discomfort that he has in his leg.

THE COURT: All right. Go ahead. Thank you.

MS. KUNSTLER: Thank you, your Honor.

BY MS. KUNSTLER:

Q. So I am going to hand you Defense Exhibit B and B1. Do you recognize those documents? Do you recognize those documents?

A. Yes. This is kind of a score sheet for filling out the -- what's called the Villalta score for determining the severity, the presence and severity of post-thrombotic syndrome. And I filled this in yesterday when I saw Mr. El-Hanafi during that visit. There's two components to this --

THE COURT: I'm sorry to interrupt you, but just as a matter of housekeeping, it's time to offer Defense Exhibit A. Do you offer it?

MS. KUNSTLER: You mean Defense Exhibit B and the exhibit --

THE COURT: Let's see. It's Defense Exhibit A to the hearing.

MS. KUNSTLER: The first exhibit?

THE COURT: Yes.

MS. KUNSTLER: I offer Defense Exhibit A.

THE COURT: Any objection?

MR. LOCKARD: No, your Honor.

THE COURT: Exhibit A is received without objection.

(Defendant's Exhibit A received in evidence)

THE COURT: And you're moving now to Exhibit B?

MS. KUNSTLER: Yes. We have now Exhibit B and B1, your Honor.

THE COURT: Okay.

BY MS. KUNSTLER:

Q. Dr. Weitz, you were describing what Exhibit B is.

A. Sorry. There are two parts to this Villalta scale. There's a part that's filled out by the patient, where the patient describes the presence and severity of certain symptoms. And there's a part that's filled out by the clinician, where I record the presence and severity of the signs, the obvious signs of post-thrombotic syndrome. And when I -- when we did this scoring system yesterday, the score came out to be 24 in the right leg, which is indicative -- any score

over five is indicative of post-thrombotic syndrome, and a score of over 15, or the presence of leg ulcers, which he does not have, clinches a diagnosis of severe post-thrombotic syndrome.

So based on the results of that score, I conclude, and based on my physical examination and my discussion with Mr. El-Hanafi, I conclude that he has severe post-thrombotic syndrome as a sequel to his extensive deep vein thrombosis in his right lower extremity.

Q. Now, why did you choose the Villalta scale test?

THE COURT: Could I interrupt one more time. You said "as a sequel to." Do you mean as a result of?

THE WITNESS: As a result of the deep vein thrombosis, as a complication of the deep vein thrombosis, yes, your Honor.

Q. Dr. Weitz, why did you choose the Villalta scale?

A. The Villalta score is the score that we use in our clinic for determining the presence and assessing the severity of post-thrombotic syndrome. And the reason we use it is because it's the one that's recommended by the International Society On Thrombosis and Hemostasis as the go-to score for determining the presence and severity of post-thrombotic syndrome. And it's chosen because it's the best validated instrument to assess the presence of this disorder and to score how severe it is. It's been used in many, many clinical trials, both for diagnosis, for assessing the response to different maneuvers.

So it's a useful one because it combines both what the physician sees, but also what the patient describes in terms of the severity of symptoms.

Q. Are there any drawbacks to this test?

A. The only drawback to it -- and it's a drawback of any instrument that we use in post-thrombotic syndrome -- is it doesn't say for 100 percent that the symptoms and signs that you're seeing are due to deep vein thrombosis. But we know that because of other indicators in the medical condition.

So another thing that we have to have seen is that the patient had documented deep vein thrombosis in the past six months or so, which is the case with Mr. El-Hanafi.

Q. Now, what did you note -- other than coming up with a score of 24 on that test, what objective notes did you make about the condition to reach that score? And if it's helpful to you, you can show them to us on B1, which is the color.

A. Right. Well, we do use this color score sheet that just gives us a visual gradation of how bad the swelling is, how much increased pigmentation or darkening of the skin there is and how much there is of the dilated veins in the foot or in the leg and redness and so on. So we use that to kind of give us a visual guide to grade whether it's present or absent, and then if it's present, to assess the severity of each of those signs.

Q. And what did you see when you examined Mr. El-Hanafi's leg?

A. Well, from the part that I filled in here in terms of he had moderate swelling, moderate increase in pigmentation, particularly in the ankle and the foot region. There was some redness, particularly in the foot. He's got some thickening of the skin down in the foot and ankle region. And he's quite tender. When you compress the calf, there's quite a bit of tenderness there on compression. So all told, I gave the gradation either of mild to moderate and severe for the dilated veins in the foot and ankle region.

THE COURT: I have a question with respect to compression. Given that he's quite tender when you compress an area, are compression stockings warranted?

THE WITNESS: Yes. Your Honor, compression stockings provide graded compression of the leg to keep the swelling down. So what you do with these stockings is you buy them first thing in the morning, before you've been up and walking for any length of time, because you can imagine if he'd been up and walking for a while, the leg is already swollen. So you put them on early in the morning, and it keeps the leg compressed; because if you allow the leg to swell, then it gets heavy and achy.

And that's when you start getting the pain when you press on it. It just feels like a swollen limb. You can imagine if you have a swollen ankle, it feels tight and it hurts when you press on it. So you're just keeping it from

getting swollen as you start doing your daily activities.

THE COURT: Have you found in your practice that some individuals' sizes don't conform to the sizes of compression stockings; in other words, what -- the amount of compression they need or the size they need is between two different sizes?

THE WITNESS: Right. Yes, your Honor. The way that we measure the legs -- and we can pick different sizes of stockings, but these are made out of an elastic material, a stretchy, elastic material. And you can get stockings that apply different degrees of compression, from rather mild compression to quite heavy compression. And you can imagine if you think of the stockings that you might wear, some are heavier hose than others. So the heavier they are, the more they compress. And right now, Mr. El-Hanafi is using 20- to 30-millimeter stockings. They're -- from what I saw yesterday, they're a little bit on the loose side, because he was able to take them off and put them on without much difficulty. And typically these things are not that easy to put on, because you really want them to put some compression on there.

But it's important that the stockings be the right size. If they're too big and they just fall down, they're not going to do any good. But he is getting some symptomatic relief, which is fortunate, that he is getting some symptomatic relief with application of those stockings. So that is a good thing. And he needs to continue to use them.

THE COURT: In your view could he benefit from stockings that are a little tighter?

THE WITNESS: Sorry, would he benefit?

THE COURT: Would he benefit from stockings that are a little tighter?

THE WITNESS: He might. And things might get worse as time goes on, because this can be a somewhat progressive condition, and he might require heavier compression stockings. But it's important that they be assessed every six months or so, because they also, as you wash them, they lose their stretchiness. So they have to be replaced every six months or so. And he might be -- require remeasuring to make sure they're the right size.

BY MS. KUNSTLER:

Q. Dr. Weitz, this kind of brings me to a question. I just wanted to make sure we're clear. When Mr. El-Hanafi came down for his examination with you, he was wearing the stockings --

A. Yes.

Q. -- on his leg?

A. He was. But I had to take them off so that I could examine his leg and his foot. And we left them off throughout the course of my examination, which was about two hours long.

Q. And also, to confirm, in your opinion the stocking has made his symptoms better, has alleviated his --

A. Sorry?

Q. The stockings have alleviated the symptoms of his condition?

A. When we discussed it, he told me that they were helping; that if he didn't have the stockings on, then he really had a lot more pain; and that without the stockings, after he's been up for about an hour, or certainly two hours, he is in terrible pain and has to lie down and elevate his leg.

Q. So would it be fair to say that without the stockings his score on the Villalta exam would have been even higher in the severe category than it was during your examination?

A. It's possible that there would have been more in the way of swelling.

MS. KUNSTLER: Your Honor, I'm going to offer Exhibits B and B1.

THE COURT: Any objection?

MR. LOCKARD: No, your Honor.

THE COURT: Defense Exhibits B and B1 are received without objection.

(Defendant's Exhibits B and B1 received in evidence)

BY MS. KUNSTLER:

Q. Now, Dr. Weitz, I have what I've marked as Exhibits C1 through C8, which are photographs that you took during your examination. Now, I understand that these might not be -- we might not discuss them exactly in the order I numbered them, but perhaps you can take a look at them and tell us what they

are and what they show. And if you want to refer to them by number, you'll see my numbers handwritten on the front.

A. Okay.

THE COURT: I don't think mine have numbers.

MS. KUNSTLER: Your numbers, your Honor, I believe are on the back. And I apologize.

THE COURT: Okay. At the break I'll explain how to put the stickers on. Okay.

Let's move right along. We're looking at Defense C1.

BY MS. KUNSTLER:

Q. Well, Dr. Weitz, if that's not the first one, if you want -- I believe -- well, that's fine. You can go through them in order.

A. It might just be easier to go through them in the order, although they're showing different things. The lighting in these examination rooms is not very good, so I apologize for the photography skills.

But C1 and C2 are pictures of the abdomen of Mr. El-Hanafi. And what they show is the areas of bruising that are the result of the subcutaneous injections of the Lovenox, the low molecular weight heparin that he's getting as an anticoagulant to treat his deep vein thrombosis. So this is given as an injection under the skin once a day.

And you can see with daily injections he's got quite a bit of bruising on the anterior abdominal wall. And you can

even see the little pin points there, which -- where the sites where the needle -- more recent needle injections were done.

THE COURT: Do these injections necessarily have to be made in the same place, or could they be spread over a wider area and perhaps cause less bruising?

THE WITNESS: They can be spread around the abdominal wall or the thighs. Mr. El-Hanafi doesn't have a lot of meat on his thighs, so he would prefer to use the abdominal wall. You can spread them out, but it isn't unusual when you've been on the low molecular weight heparin injections every day for months to get bruising at the injection sites.

But occasionally serious bleeding can occur. As you can imagine, you have something untoward happen here, and you can get serious bleeds into the abdominal wall when you inject this anticoagulant. Fortunately, he has not had anything like that so far.

Q. And why is serious bleeding a particular concern in Mr. El-Hanafi's case?

A. I'm sorry?

Q. Why is serious bleeding a particular concern in Mr. El-Hanafi's case?

A. Well, with anyone who's on an anticoagulant in therapeutic doses, in doses that you need to treat a condition as opposed to the low doses that we use to prevent a condition, when you give an anticoagulant to treat a chronic condition, you

increase the risk of bleeding. It's just -- I mean, it's not surprising that when you're on an anticoagulant long term, that you have a higher risk of bleeding. And that bleeding can be serious bleeding. It can be bleeding into the brain or it can be bleeding into another critical organ site, and it can be fatal in some cases. So long-term anticoagulation is not to be taken lightly. And we don't do it unless we have to do it. In Mr. El-Hanafi's case, we have to do it because, as I said, he had this extensive deep vein thrombosis, and he has risk factors for recurrence. And he may or may not have had recurrent deep vein thrombosis in the course since its diagnosis.

Q. Now, does Mr. El-Hanafi have any other conditions that would contribute to the risk of bleeding, other than the fact --

A. Yes. He does. He has hypertension or high blood pressure. And if you don't control the blood pressure, that also increases your risk of bleeding. You can imagine that high blood pressure is a risk factor for stroke. And if you are on an anticoagulant, you have an even higher risk of having a hemorrhagic stroke, a stroke with blood in the brain. And so you have to -- whenever you have a patient on long-term anticoagulation therapy, it's really important that you carefully manage the blood pressure to keep it under control, to lower that risk of bleeding. And also, of course, you want

to keep the blood pressure under control to reduce the long-term consequences of high blood pressure, which include renal impairment, which he's already showing signs of.

Q. Doctor, can you go through the rest of your photographs with us?

THE COURT: I'm sorry. I have a follow-up question.

MS. KUNSTLER: Sure.

THE COURT: There is medication that can reduce one's high blood pressure.

THE WITNESS: Yes.

THE COURT: Is he taking such medication?

THE WITNESS: He is, your Honor. He's on a medication to reduce his -- to reduce his blood pressure. I'm not really sure whether the dose has been titrated, but when I measured his blood pressure yesterday, his diastolic pressure was still a little bit elevated. And I --

THE COURT: How high was it?

THE WITNESS: I think it was 94 or 95 millimeters of mercury yesterday. I wrote it down but I don't remember exactly. But I noticed in the recent records he's had diastolic pressures over 100, just over 100 millimeters, which is way too high for a young man like Mr. El-Hanafi. So it really does need to be controlled.

He is getting evidence of early renal impairment. I know that he has the okay to see a nephrologist, a kidney

doctor, at some point, which I think is a good idea. But he needs to have his blood pressure better controlled.

MS. KUNSTLER: Your Honor, my next set of exhibits have to do with the blood pressure measurements that Dr. Weitz made and recent blood pressure measurements by the BOP.

THE COURT: Okay. Are you offering Exhibits C1 and C2?

MS. KUNSTLER: Yes, your Honor. If it's more helpful to go to the blood pressure and back to the photographs, I can bring these exhibits up, which are Defendant's Exhibit D and D1.

THE WITNESS: Yes. Exhibit D is from my examination yesterday, and his blood pressure sitting in his right arm was 135 over 92. So that's still not where it should be.

And Exhibit D1 gives some blood pressure recordings. And I notice in November 19, 2014, the blood pressure in the right arm was 130 over 96, and October 15th of 2014, the pressure was -- on the right arm was 150 over 101, and in the -- at different time, it was also 180 over 107. So that's high, your Honor. And it's higher than we'd like it to be.

THE COURT: How low should it be?

THE WITNESS: His diastolic should be at least under 90. It should be in the 80s at least. So we want to get it down, because he is at risk for more damage to the kidneys and also at risk for bleeding.

THE COURT: Now, you're saying he's already showing signs of early renal impairment. Can you say conclusively that that's due to the high blood pressure not being controlled?

THE WITNESS: I can't -- all I know is that the creatinine is elevated. That's a blood test that tells how well the kidneys are functioning. What the cause of that is, I can't be sure. But one potential cause of that is the high blood pressure.

Another possible contributor might be the antiphospholipid syndrome that he has that's in association with the deep vein thrombosis, because antiphospholipid syndrome can be on occasion associated with clotting in some of the small vessels, including those in the kidney, and can contribute to renal impairment. So these are things that I'm hoping that the nephrologist, that the kidney doctor, will address when he or she sees Mr. El-Hanafi in the next little while.

THE COURT: How would one address the antiphospholipid syndrome?

THE WITNESS: Again, at this point it's really just a matter of monitoring whether these tests, these abnormal tests, stay positive over time, and to see whether he has any evidence of more systemic disease that could be involving the kidneys, could be involving the brain even. Right now he doesn't. On talking to him or examining him, he doesn't have that. But

it's something that needs to be watched on a go-forward basis.

THE COURT: Is there anything that can be done to delay or impede its contribution to harming him?

THE WITNESS: Not for the antiphospholipid syndrome per se, except that he needs to remain on anticoagulation to reduce the risk of recurrent thrombosis and to reduce the risk of clotting anywhere outside the leg as well. And he needs to have his blood pressure well managed to make sure that that's not a contributing factor, either to the risk of bleeding from the blood thinning therapy, the anticoagulant therapy or for the progression of the renal impairment.

THE COURT: Okay. Let me get back to housekeeping for a minute.

The defense has offered Exhibit C1 and C2. Do you want to offer also 3 through 8?

MS. KUNSTLER: We haven't discussed them, but we're happy to offer them at this time.

MR. LOCKARD: No objections.

THE COURT: All right. There's no objections, so I will enter defense Exhibits C1 through 8 without objection.

(Defendant's Exhibits C1 through 8 received in evidence)

THE COURT: Now, Exhibit D and D1, are you ready to offer them?

MS. KUNSTLER: I am, your Honor. Just for clarity,

I'd like to.

BY MS. KUNSTLER:

Q. What is Exhibit D, Dr. Weitz, and what is Exhibit D1? Can you tell us what Exhibit D is and what Exhibit D1 is? I know you --

A. Exhibit D is just a sheet with some of my writing, a few notes that I jotted down when I saw Mr. El-Hanafi yesterday.

Exhibit D1 is a record from the Bureau of Prisons, which is a list of the blood pressure measurements that were made and pulse measurements that were made at various -- on various dates.

Q. And given your blood pressure results and the blood pressure results that you have from the Bureau of Prisons, would you classify this as poorly controlled blood pressure or that that's what the status of his blood pressure is right now, poorly controlled hypertension?

A. It's inadequately controlled hypertension at this point, yes.

THE COURT: What could adequately control his hypertension?

THE WITNESS: What is?

THE COURT: What could adequately control his hypertension?

THE WITNESS: Just medication, your Honor.

THE COURT: More medication?

THE WITNESS: More medication, maybe a changing of the dose, maybe even adding an additional medication. Sometimes we use a stepped approach. But I don't know really whether his dose of his antihypertensive, his blood pressure lowering medication, whether it's been altered or changed. I really don't know.

BY MS. KUNSTLER:

Q. And you mentioned the early signs of renal failure. Did you use any kind of measurement to determine that it was an early stage failure, or a mild failure?

A. The way we look at -- the way I look at it is to calculate a creatinine clearance to see how well the kidneys are functioning. So in addition to just looking at the creatinine level, you can use various formulas to calculate the creatinine clearance. And the one we tend to use is the so-called Cockcroft-Gault formula --

THE COURT: Could you spell that.

THE WITNESS: C-O-C-K, then C-R-O-F-T, then another word is Gault, G-A-U-L-T.

A. And this is just a formula that takes into account the person's creatinine, their age, their weight and the sex, whether they're male or female. Then you make a calculation. And I did a calculation of -- based on his creatinine clearance, and he comes out with mild impairment.

But he's very -- a young man and his -- you can have

an exponential drop in renal function. So it's something that we still need to watch very closely on a go-forward basis to make sure that it doesn't continue to decline.

MS. KUNSTLER: Your Honor, I apologize. I think I may have missed offering Exhibits D and D1. I offer Exhibits D and D1.

MR. LOCKARD: No objection.

THE COURT: Defense Exhibits D and D1 are received without objection.

(Defendant's Exhibits D and D1 received in evidence)

THE COURT: I'd like to ask the doctor to simply tell us in plain English what is written on Defense Exhibit D.

THE WITNESS: On Exhibit?

THE COURT: I take it you measured his left calf and his right calf.

THE WITNESS: So I measured the circumference of the left and right calf 10 centimeters below a bony landmark so it's at the same distance in both calves. And I measured the right calf as two centimeters larger in circumference than the left. Underneath that I recorded the type of stocking that he has. Right now he's got Jobst stockings; that's the manufacturer of those elastic compression stockings. And they're engineered to apply 20 to 30 millimeters of mercury pressure. So that's the -- how stretchy or how tight they are.

And then on the right side of the page I got his

oxygen saturation. We can use a little machine that you put on the finger there to measure the oxygen saturation in the blood on room air, which was 98 percent. His heart rate was 75 and his blood pressure in the right arm, sitting, was 135 over 92 millimeters of mercury.

THE COURT: Okay.

BY MS. KUNSTLER:

Q. Now, Dr. Weitz, you reviewed Dr. McKinsey's most recent report dated December 19, 2014?

A. I'm sorry?

Q. You reviewed Dr. Weitz's most recent report dated December 19 -- sorry, Dr. McKinsey's most recent report?

A. Yes.

Q. And how were your findings different from his? And if it's helpful, I can bring the report up to you, but --

A. No, I think that -- I mean, I use the Villalta scoring system to assess the presence and severity of the post-thrombotic syndrome. And I did measure a difference in circumference between the two calves. And I think Dr. McKinsey did not find a difference in circumference between the two legs.

MS. KUNSTLER: Just one moment, your Honor.

THE COURT: Yes, take your time. (Pause)

Q. Do you have an opinion or any thoughts as to why you reached a different result?

A. I can't be sure. I know Mr. El-Hanafi told me that when Dr. McKinsey made the measurements, he had been lying on the examining table. When I made the measurements, he had been sitting for some time with his stockings off. And then I also had measured them when he was standing.

Q. Thank you.

Now, we discussed the severity of the PTS, the post-thrombotic syndrome, and you did discuss somewhat the severity of his disability, his ability to perform normal tasks. Are there any other -- I think you went through running and walking or doing exercises. Are there any other tasks that he's limited in performing, based on his level of disability?

A. Well, he tells me that unless he's wearing the stockings, he really can't do much after standing or being up. He can just -- even just regular activities for an hour or two, he's really unable to continue. With the stockings, he's able to do more without that discomfort. But even with the stockings he's still limited in what he can do, for simple exercises like, as I said, squatting or trying to jog are still impossible for him.

Q. Now, we've gone through --

THE COURT: I'm sorry to interrupt.

Can he do upper body exercises?

THE WITNESS: He should be. I didn't ask him that, but he should be able to do upper body exercises without any

problem, yes.

Q. And what about sitting or sitting in one place for any length of time? Is that --

A. In most people with post-thrombotic syndrome, sitting -- walking is good because when you're walking, you keep the muscles in your calves contracting. But sitting with your legs dangling, that's a problem, or just standing is a problem. And so if you're going to sit for extended lengths of time, leg elevation is important.

Q. Now, we've gone through -- you've discussed hypertension. You've discussed risk factors. You've discussed renal impairment and the dangers of bleeding on the stomach injection site, or just bleeding generally. I'm wondering, is there anything perhaps -- I'm wondering if it's useful for -- are there any medical needs that we haven't addressed? Or perhaps it would be good to do a summary of the medical needs, rather than kind of copy them haphazard so we have them in one place together.

A. Well, I guess the important things on a go-forward basis are that for management of the post-thrombotic syndrome, he needs to have properly fitted compression stockings. And he needs to be in an environment where he can elevate his legs and he's not kept immobilized for any length of time.

He will require long-term anticoagulation therapy to prevent recurrent deep vein thrombosis. And this poses a risk

of bleeding. So he should be in an environment where that risk of bleeding is minimized. And if he does have -- fell and hit his head or was in a fight and had blunt trauma to the chest or something, there's a risk of internal bleeding. And so he needs to be in an environment where he can be as supervised as possible and where he can get rapid medical attention, should that occur.

He needs monitoring of his high blood pressure to make sure it's controlled and it stays where it should be. And he's going to have to have an assessment by the nephrologist to assess why his renal function is declining, and to certainly address the high blood pressure and maybe look for other potential causes.

And he needs to be followed from the antiphospholipid syndrome, just in terms of to make sure there's no evidence of systemic progress of thrombosis that goes beyond clotting in the deep veins of the leg.

Q. And what are his needs in terms of exercise or -- his needs in terms of exercise or ability to move around?

A. Exercise is good for patients with post-thrombotic syndrome. I mean, the main thing is using the compression stockings, but even, you know, walking programs can be helpful and are worth a try in some of these people. Some people can do them better than others. And it's something that could be considered. Clearly he can't jog, but maybe he could get

exercise through some sort of walking.

Q. Now, why is ankle shackling a danger for him?

A. Well, ankle shackling is a danger because it restricts the movement. And you could imagine that if you have a condition that's causing you to get pain and swelling without -- an inability to elevate your leg, that's going to exacerbate the symptoms. And shackling for long -- immobilization of an extremity for long periods of time can be precipitant for clotting as well.

THE COURT: Let me ask you a question. I don't know if this is possible, but if he were transferred, and if the marshals wanted him shackled, could he be transferred lying down?

THE WITNESS: I mean, that would probably help his symptoms, yes, if he were transferred lying down. I gather what they're using now, instead of metal shackles, they're using kind of a flexi-plastic, which is probably better than the tight, metal shackles. So at least that's an improvement. But even just being allowed to elevate the leg would be a help, your Honor.

THE COURT: When you say "elevate," would lying prone constitute elevation?

THE WITNESS: It would, but it wouldn't even have to be that much. It could just be -- like if you could imagine putting your leg on a footstool, even that would be a help.

But just having your leg straight down like we are sitting now could be -- could be problematic for a long period of time in someone with post-thrombotic syndrome.

BY MS. KUNSTLER:

Q. Is there anything else that could be done to minimize the risk while Mr. El-Hanafi was shackled, other than elevating the leg?

A. I mean, if you really had to do it is to release it periodically and let him exercise the leg and move around a bit. Always a good thing in anyone who is shackled. They shouldn't be shackled for any extended period of time.

THE COURT: How would you define "extended period of time"? How would you define "extended"?

THE WITNESS: Well, I think anything beyond about four hours is an extended period of time. And for someone with post-thrombotic syndrome, even an hour can be torture if you can't move your leg.

MS. KUNSTLER: One moment, your Honor. (Pause)

I'm going to move on now to diagnosis and treatment generally and what's optimal treatment.

Q. Are there specific guidelines regarding the timing for diagnosis and early treatment?

A. Yes, there are guideline documents. The one that -- the ones that I tend to use are those of the American College of Chest Physicians.

Q. I realize we didn't -- before I do that, are there any other photos among the C exhibits that you want to highlight in terms of what you saw on --

A. Yes. We have Exhibit C3 to C8 that we didn't discuss.

And C3 and C4 show the foot and ankle. And you can see, especially on C4, you can see the discoloration around the ankle, that brown discoloration. And you can see these dilated veins in the foot.

And you can also see on C3 that that's his right foot but the left foot doesn't have those problems. It's the right foot, the right leg, that was involved with the deep vein thrombosis.

C5 shows the other side of the foot, where you can again see the dilated veins on the top of the skin, what we call the superficial veins. When you get blockage of the deep veins, and then you start getting dilatation of the superficial veins.

C6, Mr. El-Hanafi has -- is pointing to -- it's hard to see it there, but to a dilated superficial vein that's just at the side of his knee. That's an area that's quite tender for him.

And C7 shows a bit of dilation of one of the superficial veins that runs on the inside of his right leg.

And the last one, C8, just shows the other leg, which really looks pretty normal.

THE COURT: Doctor, looking at Defense Exhibit C4.

THE WITNESS: C4, yes.

THE COURT: What is the cause of the brownish area?

THE WITNESS: Yes. This brown discoloration, your Honor, it's caused by the seepage of red blood cells into the tissues. And then the macrophage is kind of the garbage collector cells, if you will. They engulf these red blood cells. And because of the iron inside the red blood cells, it gives you that brown discoloration.

THE COURT: Is that a danger for a patient?

THE WITNESS: It's -- cosmetically it doesn't look very good. It just is a sign that there is enough pressure in the veins that you're getting leakage of blood and fluid into the tissues, and it's a sign that the severity of the post-thrombotic syndrome is --

THE COURT: It's a sign of severity?

THE WITNESS: It's not a danger per se for having the discoloration, but it's just an indicator that there's enough swelling and extra evisceration that the blood is seeping out into the tissues there to give you the red blood cell iron accumulation in the tissue. So it's an indicator of the severity of the condition. That's all.

THE COURT: Thank you. Would it lead to a deficiency in iron in the patient's blood?

THE WITNESS: No. I mean, it's not bleeding enough to

cause -- it's a good question, but it's not bleeding enough to cause iron deficiency. But it does mean that there is some seepage of blood and blood into the tissues.

BY MS. KUNSTLER:

Q. Now, the darkening that the judge just asked you about, is that hemosiderin?

A. That's hemosiderin, yes. You're right.

Q. Now, did Dr. McKinsey find hemosiderin?

A. I don't recall him mentioning that.

Q. Now, we can return back to the guidelines we were discussing, the guidelines related to the timing for diagnosis and early treatment.

You mentioned the American College of Chest Physicians?

A. Yes.

Q. Now, is there also something called a Wells score?

A. I'm sorry?

Q. A Wells score?

A. Yeah. The Wells score is a scoring system that's used to assess the clinical likelihood of deep vein thrombosis. There's also a Wells score for assessing the clinical, clinical likelihood of pulmonary embolism, when the clot breaks off from the vein in the leg and travels to the lung. But the Wells score is used when we see patients to assess whether the -- a deep vein thrombosis is moderately to highly likely or is

unlikely. And we sometimes -- we often use it -- I use it in my practice when I see a patient where I'm suspecting the possibility of deep vein thrombosis to assess how likely is it that this patient has deep vein thrombosis.

Q. So are these, the American College of Chest Physicians and the Wells score, these are some of the main guidelines you follow with regard to timing, with regard to diagnosis and early treatment of deep vein thrombosis?

A. Yes. They -- the Wells score is something that we incorporate in our algorithm, our approach to diagnosing patients with suspected deep vein thrombosis. And the guidelines give a framework for the standard of care for diagnosis and treatment of patients with deep vein thrombosis or its complications.

Q. And were you involved at all in the production of either the American College of Chest Physicians guidelines or the Wells score?

A. Well, I was involved in the development of the Wells score. Phil Wells, who developed that score, was one of our research fellows. And I'm on the -- some of the publications with him that describe the score and have used it.

And as far as the guidelines go, I've been involved with the American College of Chest Physicians guidelines on antithrombotic therapy for quite a few years. We update them every about four years. I am not an author on the guidelines

on the management of venous thromboembolism, but I was part of the voting committee. We did have a chance to vote on some of the recommendations at the time when we discussed each of the chapters that went into that guideline. So we voted on areas where there were bones of contention among the experts, as you might expect.

Q. Now, I'm handing you what's been marked as Defendant's Exhibit E. Can you tell me what this is?

A. Yes. This is the article, your Honor, and it's quite a tome. It's thick, and there's a lot of reading, which some of my clinician colleagues complain about. But it does give a summary of the recommendations at the beginning.

Q. Now, what do these guidelines tell us about early DVT diagnosis and care?

A. Well, the guidelines state that if you suspect deep vein thrombosis, you should do appropriate diagnostic testing. And if there's going to be a delay in obtaining the diagnostic test, as long as the patient isn't at high risk for bleeding, you should cover the patient with anticoagulation therapy so that they -- you're covering them for the worst-case scenario. In the case of deep vein thrombosis, until you get the diagnosis and rule it out, you're covering for the possibility that they could develop a fatal pulmonary embolism while you're waiting to make the diagnosis. So you cover them with an anticoagulant while you wait for the test, unless you can get

the test right away.

So if you're in a hospital setting, sometimes you can get the test almost immediately. But if you're in a clinic setting or an outpatient setting, it can take a little time to get the test done. And then you cover the patient with an anticoagulant while you're waiting. And then if you rule in, you've got him already on treatment, and if you rule it out, you can stop the treatment.

Q. Now, do the guidelines tell you how much time should pass between when an ultrasound is ordered and when it's performed?

A. They really don't speak to that. The expectation is that you'll get the diagnostic testing done as soon as possible.

Q. So if somebody is at high -- is determined to be a high risk for a DVT, what do the guidelines tell you to do in terms of if an ultrasound can't be performed right away?

A. They say that if you think the risk of DVT is high and you can't get the test within four hours, then you should cover them with anticoagulants until you can get the test. So sometimes it happens that the patient presents -- they always present on a Friday evening of a long weekend, and you might not be able to get the diagnostic test over the weekend. So what I would do in that case is I would cover the patient with anticoagulants until I can get the test on the Monday or the Tuesday. So that might be the longest delay that I might see.

But normally, if they're during sort of business

hours, I can get the test done within an hour or so, where I practice. But it may not be like that everywhere. So then you cover the patients while we're waiting for the test, but you shouldn't delay the test for more than a few days at most, because you want to make a diagnosis and rule it in. And if they don't need to be on anticoagulant therapy, you can stop it. And if they do, you need to then assess, how long do they have to be treated, and what sort of treatment are you going to go for? So it's important to get the test done as soon as you can.

Q. Now, you stated that if it's a suspicion of a high likelihood, you treat with medication within four hours. What about moderate or -- there's three categories, right, and three indications of what you should do. Could you go over those with us?

A. So in moderate probability, you know, the guidelines say you might wait for -- if you can get it within 12 hours, you might not have to cover them. So they're just giving a wider time frame. But I think if you can't get the test done within a day or so, you should cover the patients. You're better off covering the patients with an anticoagulant, unless they're at high risk for bleeding, because then you're covering for the worst-case scenario: That they have the disease, that the disease extends and that the patient drops dead because of a pulmonary embolism.

MS. KUNSTLER: Your Honor, I'd like to offer Defense Exhibit E.

MR. LOCKARD: No objection.

THE COURT: Defense Exhibit E is received without objection.

(Defendant's Exhibit E received in evidence)

MS. KUNSTLER: Thank you.

BY MS. KUNSTLER:

Q. Now, in Mr. El-Hanafi's case, when was a DVT first suspected?

A. Did he --

Q. When was it first suspected?

A. The first -- the first ultrasound that was done that detected it was at the end of September of 2000 -- I think it was 2011.

Q. Yes, that's accurate. But when was the first mention of the possibility of DVT in Mr. El-Hanafi's medical?

A. So the first mention of the possibility of DVT was made, I think, on May 16th by a Dr. Watson in Oklahoma, who noted that he had pain, was complaining of pain in his leg. And he or she wrote that the differential diagnosis included early deep vein thrombosis, Baker's cyst or other popliteal pathology.

Q. Dr. Weitz, I'm going to hand you a binder of exhibits that has a number of the exhibits that we're going to be discussing. The first one is Defendant's Exhibit F. Can you tell us what

that exhibit is.

A. Yes. The first one is differential -- it's Exhibit F, which was dated on 5/16/10 and is signed by Dr. K. Watson from Oklahoma City. And in there, in terms of the assessment, the doctor writes, early DVT, deep vein thrombosis versus Baker cysts versus other popliteal problems.

Q. Now, in your practice, after you make a differential diagnosis such as this one, what are your next steps?

A. Well, I think if I were considering those possibilities, I would order an ultrasound, because an ultrasound will tell you whether it's deep vein thrombosis, it will tell you whether it's a Baker cyst, and it can look in the popliteal, which is the area behind the knee, for other pathologies that might be a cause of discomfort.

Q. And how soon would you do that?

A. I would do it as soon as possible; within, you know, hours or a day or as soon as I could get it.

Q. And what would you do if you weren't able to do it in a timely fashion?

A. Well, again, if I entertained the possibility of deep vein thrombosis, as I said before, I would consider covering the patient with anticoagulants until I can get the diagnosis made.

MS. KUNSTLER: Your Honor, I would offer Defendant's Exhibit F.

MR. LOCKARD: No objection.

THE COURT: Defense Exhibit F is received without objection.

(Defendant's Exhibit F received in evidence)

MS. KUNSTLER: Thank you, your Honor.

BY MS. KUNSTLER:

Q. Now, I'd like you to turn in that binder to Defendant's Exhibit G.

A. Exhibit?

Q. Exhibit G.

A. I've got it, G. That's dated 7/26/11?

Q. Yes. What's the date on that document?

A. That's -- the encounter date that's stated here was 7/27/2011.

Q. But the document, the document refers to what? What does the document refer to?

A. The document refers to an encounter that Mr. El-Hanafi had with a chief complaint of lower extremity pain. And the provider has seen the -- it looks like it's seen by a physician's assistant, who documents that the inmate was seen yesterday, due to chronic pain in right lower leg, attributes the pain to foot cuffs being too tight about four months ago. Recalls the officer loosening the cuffs during the trip for comfort. Has been seen in the past for sick calls re this and states no treatment has worked; antibiotics, hot, cold treatment, Naproxen, which is an antiinflammatory agent. An

X-ray was done, which was negative. Reports pain is in the forefoot and calf and not able to discern if it's radiating from a calf to the forefoot or vice versa. Pain is now a 5, which is just the level of pain on a scale. However, it's a 10, which is the highest level, when he walks for a long periods of time.

Q. And what is ordered on that date or what -- well, is Mr. El-Hanafi evaluated by a doctor on that date?

A. Yes. It sounds like, if I look at the next page of that report, the clinical -- the clinical director was called in to also examine the foot and the clinical director ordered an ultrasound to be done. And it says, the reason for the request is ultrasound Doppler of right lower extremity due to pain of four months.

Q. Now, do you know how long after the date the ultrasound was ordered it was actually performed?

A. It was done about two months later.

Q. Now, I know this may be hammering a nail I've already beat to death a little bit, but under the guidelines we've discussed, would you consider that an acceptable delay?

A. I think that's an unacceptable delay. I mean, a delay of one, two, three days might be acceptable, but a delay of two months is unacceptable. And he was not given anticoagulants to cover him for that two-month period.

Q. Now, between those two exhibits I just gave you, Exhibit F

or -- we just discussed Exhibit F from 5/16/10 and Exhibit G from 7/26/2011, between those dates, as far as you know, from the records you've reviewed, was Mr. El-Hanafi examined by a doctor at any point between those two dates?

A. At least with all the records I received and reviewed, he was not seen by a physician. He was seen by various physician assistants, but never examined by a physician, except by Dr. Watson in Oklahoma in May, and then by the clinic director in July of 2011.

Q. And does the record that you have before you right now, Exhibit G, does that record also consider the possibility DVT -- I know it orders the ultrasound, but is DVT mentioned in that report?

A. I don't see that -- the possibility of DVT is mentioned.

Q. If you turn to page -- do the words DVT appear in there? If you turn to page one of the record.

A. It says -- no. It just says -- I don't see that it's mentioned there. There's no history of DVT, self or family, but it doesn't --

Q. I was just wondering if the words DVT appear.

A. I think, though, that when you start ordering adult Doppler ultrasound of the right lower extremity with pain in the leg that's been going on for that long, and swelling, and calf tenderness, that must be thinking of deep vein thrombosis.

THE COURT: Could you pause just a moment. I want to

check the transcript.

MS. KUNSTLER: Sure. (Pause)

THE COURT: Thank you. You may proceed.

MS. KUNSTLER: Sure.

BY MS. KUNSTLER:

Q. Do you see on the first page of that record, it says no family history of DVT?

A. (Nods head)

Q. I'm sorry. You have to speak your answer.

A. Sorry?

Q. Do you see on the first page of that record --

A. Yeah, it --

Q. -- it says no family history of DVT?

A. Yes.

Q. So in your opinion does that mean that in conjunction with the fact that an ultrasound was ordered meant that --

A. I think that's just in taking a history one --

MR. CRONAN: Objection. Speculation.

THE COURT: Sustained.

MS. KUNSTLER: Okay.

Q. But your opinion is when the ultrasound is ordered because --

A. My opinion is that an ultrasound was ordered because the patient has symptoms and signs in the right leg that have been persistent for four months and have not responded to various

treatments. And they're looking for something, and the ultrasound is the way to diagnose deep vein thrombosis.

MR. CRONAN: Objection, your Honor. It may be a matter of semantics, but I think the doctor can testify whether he would have ordered the ultrasound but not why the ultrasound was ordered.

THE COURT: That's correct. I'll accept that correction to the transcript.

Go ahead.

Q. Dr. Weitz, when a patient presented to you with these symptoms, what would you have been considering and what would you have ordered in order to diagnose -- what would have been in your mind and what would you have ordered?

A. I certainly would have considered the possibility of deep vein thrombosis in the leg, with someone who has ongoing pain and swelling in the lower extremity that hasn't responded to a variety of different maneuvers.

Q. Now, did you form an opinion whether the care Mr. El-Hanafi received was the optimal treatment in this case?

A. I have reached an opinion. I think that he had the possibility of deep vein thrombosis considered on two occasions: One very early on in the course, when Dr. Watson raised the possibility of early deep vein thrombosis; and then later in July, he comes in and he's got this persistent pain and swelling in his right lower leg, to the point where he

can't -- he can't walk for any long period of time. And the ultrasound was ordered on 7/26, wasn't done until two months later. And when it was done, it shows extensive deep vein thrombosis.

Q. Now, what should have been done in this case?

A. Well, I would say that when Dr. Watson saw the patient and raised the possibility of early deep vein thrombosis, an ultrasound should have been done there to settle on the differential diagnosis that he or she raised. And then when it was ordered again, when an ultrasonic was finally ordered on 7/26, certainly there shouldn't have been a two-month delay before getting that, after he's had progressive symptoms for months that hasn't -- that haven't responded to all kinds of different measures that they've tried.

Q. And do you have an opinion on when Mr. El-Hanafi's DVT started?

A. I can't be 100 percent sure when it started, but he certainly had symptoms that started after he came back from the flight from Dubai in the end of April of 2010. And the possible diagnosis was entertained for the first time in May of 2010. And then he had progressive symptoms. So I think we're looking at something that's been progressing for months.

Q. Now, do you think it's reasonable to draw the conclusion that Dr. McKinsey draws, which is that the DVT spontaneously occurred six to eight weeks before it was diagnosed?

A. Well, before the ultrasound is what he was -- I think that's highly unlikely, because then the DVT would have started after the ultrasound was ordered, and it would have post-dated the beginning of the symptoms, which were certainly pretty bad for several months before the ultrasound was ordered.

Q. Now, do you have an opinion as to whether the lack of earlier treatment was a contributing cause of Mr. El-Hanafi's present condition?

A. I think that it's more likely than not that the -- that had the ultrasound been done earlier, the clot would have been less extensive. It wouldn't have been as big or extended right up the leg into the thigh. And the extent of thrombosis, the extent of the DVT, is a predictor of the risk of post-thrombotic syndrome. So the larger the clot, the greater the risk of post-thrombotic syndrome.

So if it had been possible to diagnose this earlier, if they had done the ultrasound when the diagnosis was first entertained, then it might have been localized in the calf and he received treatment to prevent it from expanding, he might not be suffering from post-thrombotic syndrome now.

Q. Is it possible to prevent post-thrombotic syndrome?

A. The things that we can do to reduce the risk are to diagnose it -- well, primary prevention, that's not an issue here, to -- but if you do diagnose, diagnose it as soon as possible, so it's less extensive. And then treat it for --

with the appropriate intensity and duration of anticoagulation.

And he had the ultrasound ordered on the 7/26 and didn't get it for two months later. So even if we thought that it started on 7/26, not having treatment for two months means you're not getting adequate treatment for at least two months. So those are risk factors for post-thrombotic syndrome.

THE COURT: I'd like to ask you a few questions relating to what you've just testified to.

You say it's more likely than not that if the ultrasound had been earlier, the clot would not be this large as it is. What more can you tell us about what your opinion is based on and the likely size of the clot, when not treated?

THE WITNESS: Your Honor, studies using X-rays of the veins or using other scanning techniques show that most clots start in the deep veins of the calf, and then they might just resolve on their own. But some of them will get bigger and gradually work their way up the leg to go to the vein behind the knee, into the thigh and higher.

The reason why we get concerned about the clots that get bigger is because, one, they're more likely to break off and travel to the lungs, which can lead to a fatal condition known as pulmonary embolism. And two is that once you start getting to the veins behind the knee and into the thigh, and the clot gets more extensive that way, you're blocking the outflow of the blood from the leg. You're kind of blocking the

plumbing, if you will. And that causes the formation of collaterals, the opening up of smaller vessels around to carry the blood flow. And that increases the risk of post-thrombotic syndrome.

And so what I maintain is that we try and diagnose the clots as early as we can and get them on treatment to prevent them from getting bigger, one, to reduce the risk that they have a pulmonary embolism; but, two, also to keep them as small as possible, to reduce the risk of post-thrombotic syndrome. Because once you develop post-thrombotic syndrome, there's really -- we can control the symptoms, but there's nothing we can do to get at the underlying cause. And it's a chronic condition that's going to be debilitating, reduces quality of life. It really isn't a very pleasant thing to have for the rest of your life, particularly if you're at a young age, like Mr. El-Hanafi.

THE COURT: I understand that your -- the way you view this question is what would you do --

THE WITNESS: Yes.

THE COURT: -- as reasonable care for a person.

One of the things that would be helpful to me to understand or have some knowledge about is: Is there any way for you to be certain as to what got worse for Mr. El-Hanafi, due to inadequate care -- or inadequate care, in your view?

THE WITNESS: Well, what I think Mr. El-Hanafi is

stuck with, because of the delay in the diagnosis, is he's stuck with quite severe post-thrombotic syndrome, which is going to limit his quality of life. And, again, I think if the diagnosis had been made earlier, the clot would have been -- and treatment had been started earlier, the clot would have been less extensive, and he might have had either no post-thrombotic syndrome or perhaps less severe post-thrombotic syndrome than he has now.

THE COURT: As I understand your testimony, you are weighing possibilities, and perhaps probabilities, but you lack certainty as to whether any of his current condition was worsened by inadequate care?

THE WITNESS: I think that even a delay of -- even if we said that his clot occurred in July 26, 2011 -- and that's unlikely, because he already at that time had four months of leg symptoms -- waiting another two months to make a diagnosis is below the standard of care. And that delay, even a two-month delay, let alone six-month delay, if we say that his symptoms started four months before and we even ignore that he had symptoms even in 2010, even a six-month delay is even worse.

THE COURT: I understand your frame of reference with respect to standard of care.

You now have the ability to see how impaired Mr. El-Hanafi is, and I'm wondering, do you have any certainty

as to the extent to which his impairment is attributable to lack of adequate medical care?

THE WITNESS: Well, I think he has -- he has severe post-thrombotic syndrome right now. And I can't be 100 percent sure that had he received the diagnosis sooner, he wouldn't have post-thrombotic syndrome. But I really do think that it's more likely than not that had he had the diagnosis made sooner and the treatment started sooner, he would have had -- he would have now less severe post-thrombotic syndrome or no post-thrombotic syndrome.

THE COURT: Thank you.

MS. KUNSTLER: Thank you, Doctor.

THE COURT: We're getting close to when we should take a morning break. Is this a good time to break?

MS. KUNSTLER: Yes, your Honor.

THE COURT: All right. Let me note that I believe Dr. McKinsey is in the courtroom. Thank you. He is. I think it's perfectly appropriate for counsel to talk with the witnesses, any witness who will talk to you, during a break. And while you are questioning, while you're cross-examining, I think it's appropriate for the doctor to stand next to the cross-examiner to funnel questions that will make the testimony more useful, the examination more useful.

All right. Let's take a break until 12:05. That's a little more than 15 minutes.

(Recess)

MS. KUNSTLER: I don't think I have yet offered Defendant's Exhibit G, although --

THE COURT: You did. It's been entered.

MS. KUNSTLER: Thank you.

BY MS. KUNSTLER:

Q. Now, Dr. Weitz, Dr. McKinsey discounts Mr. El-Hanafi's symptoms in the 17 months prior to his diagnosis. Why do you credit these symptoms?

A. Why?

Q. Why do you credit these symptoms?

A. Why do I?

Q. Credit them. He discounts them. Why would these symptoms have made you consider diagnostic testing earlier?

A. Well, he's got leg symptoms that -- going on and progressing, not responding to different measures, including analgesics, antiinflammatories, compresses, leg stretches, and starting to get dilated superficial veins, more and more pain, difficulty walking because of the pain, all of this progressing over the course of several months. I think you would begin to think that you have to look for a different cause for those symptoms. And deep vein thrombosis would certainly be on my differential diagnosis.

Q. Now I'm going to hand back up to you this appendix of exhibits. If you could turn to what's been marked as

Defendant's Exhibit H. And can you tell us what that document is.

A. This is an encounter on 5/24/2010. The encounter was with a physician's assistant, not with a physician. And what this -- the health problems noted there were pain in joint, lower leg, current. The status is listed as current. And medications were prescribed, which included aspirin and ibuprofen, which is an antiinflammatory. So both an analgesic, aspirin, and an antiinflammatory agent, ibuprofen, were prescribed for pain in joint and lower leg, it says.

Q. Now, in Dr. McKinsey's December 2013 report he claims that this record shows that Mr. El-Hanafi denies any painful -- any current painful conditions. Is this an inaccurate description of this record or is it -- is Dr. McKinsey's description accurate?

A. It seems to be documented here that the patient was complaining of pain in joint and lower leg. And the physician's assistant is ordering both an analgesic, aspirin, and an antiinflammatory, ibuprofen. So it's hard to believe that there was nothing there that -- why would these medications be prescribed, if there weren't pain?

MS. KUNSTLER: Now I'd like to offer Exhibit H.

THE COURT: Any objection?

MR. CRONAN: No objection.

THE COURT: Defense Exhibit H is received without

objection.

(Defendant's Exhibit H received in evidence)

BY MS. KUNSTLER:

Q. Now, I'd like you to turn to what has been marked as Defendant's Exhibit I.

A. I?

Q. I, yes.

Can you tell me what this record is?

A. This was an encounter on 7/16/2010. Again, the encounter appears to be with a physician's assistant. And under review of systems -- ROS stands for review of symptoms -- and musculoskeletal general, there is documentation that there is swelling. Yes is noted there.

Q. Now, in Dr. McKinsey's December 2013 report, he claims that this record shows no evidence of lower extremity edema or swelling noted. Is Dr. McKinsey's description an accurate description of this record?

A. Well, there was some swelling, according to this document. Exactly where, it doesn't say.

MS. KUNSTLER: I'd like to offer Defendant's Exhibit I.

THE COURT: Any objection?

MR. CRONAN: No objection, your Honor.

THE COURT: Defense Exhibit I is received without objection.

(Defendant's Exhibit I received in evidence)

THE COURT: I'm told by my law clerk that Defense Exhibit G has not been entered. Is there any objection?

MR. CRONAN: No, your Honor.

THE COURT: Defense Exhibit G is received without objection.

(Defendant's Exhibit G received in evidence)

BY MS. KUNSTLER:

Q. Now, I'd like you to turn to page eight of Exhibit I.

A. Exhibit I, page?

Q. Page eight. And can you read for us the comments on the bottom of that page.

A. Yes. On page eight of that exhibit, which is dated 7/16/2010, the comments written at the bottom of that page, I think it's right leg previously swollen since restraint was put during inmate's transport from Oklahoma.

MS. KUNSTLER: One moment, your Honor.

THE COURT: Yes. (Pause)

Q. Now, in your opinion, Doctor, would it be reasonable or -- to connect the swelling mentioned here with the swelling mentioned on the other page of this record?

A. Yes. Then again, on page ten of that exhibit, it also goes on to say about pain in joint, lower leg, there's an indication for, again, ibuprofen and aspirin.

MR. CRONAN: Your Honor, may I just ask for

clarification that last question, I believe there was a reference to swelling indicated in another part of the record. And I'm not sure what that was a reference to.

MS. KUNSTLER: Sure. I can clarify that.

THE COURT: You mentioned pages eight and ten.

MS. KUNSTLER: Yes.

BY MS. KUNSTLER:

Q. On page four of that report at the bottom of the page, is swelling mentioned?

THE COURT: It is.

Q. Now I would like you to turn to what's been marked as Defendant's Exhibit J.

A. Exhibit J?

Q. Yes. Can you tell me what that is.

A. And this is the 3/11/11 report where the chief complaint is stated to be pain. And it states here that the inmate complains of pain and swelling on -- starting from the right ankle going up the calf, and now goes up the back of the knee and right thigh. Refers that this condition started about 10 months, was cuffed in the ankle while being transported to another jail. Was given ibuprofen at that time, which worked temporarily.

Q. And what does the practitioner who evaluated him find?

A. Swelling noted on right ankle. Tenderness in the calf area and popliteal area noted. Prominent veins on the foot and

ankle area. Full range of motion.

Q. Now, what would be your next course of action, if you had a patient who complained of those symptoms?

A. Excuse me?

Q. What would your next course of action be, if you had a patient who complained of those symptoms and you made those findings?

A. Well, again, with pain and swelling in the ankle and calf region and tenderness in the popliteal area, prominent superficial veins, I would be worried about deep vein thrombosis. And I would have ordered an ultrasound.

MS. KUNSTLER: Your Honor, I would like to offer Defendant's Exhibit K.

THE COURT: J?

MR. CRONAN: No objection to J, your Honor.

MS. KUNSTLER: I think I already offered J, but I will offer J, if I didn't. But I was just offering K, but I can offer K and J.

THE COURT: All right. Does the government object to Defense Exhibit K?

MR. CRONAN: No, your Honor.

THE COURT: All right. Defense Exhibits J and K are received without objection.

(Defendant's Exhibits J and K are received in evidence)

BY MS. KUNSTLER:

Q. Now, Dr. Weitz, can you turn to Defense Exhibit K?

A. K? Yes. This exhibit is dated 3/30/11. And the complaint at that time was pain in right ankle along Achilles tendon line. No limitation of movement, but on exam under musculoskeletal and ankle, foot, toes, it says, yes, edema, swelling -- swelling and edema are the same thing -- and ecchymosis, which is bruising or discoloration.

Q. Now, again, in Dr. McKinsey's December 2013 report, he states, the record shows no swelling. Is this an accurate description of the record? Dr. McKinsey's report, he says the record indicates no swelling. Is that an accurate --

A. Well, it says here that there's edema and swelling, but they both mean swelling, so, yes, there's swelling.

Q. Now, Dr. McKinsey date's Mr. El-Hanafi's DVT to six to eight weeks before the September 2000 (sic) ultrasound, based on the appearance of that ultrasound. Is it possible to tell from an ultrasound, from an initial ultrasound, when you have no previous ultrasound for reference, when a clot started?

A. I mean, in my experience with ultrasonography, it's impossible to exactly date the onset of a clot from ultrasound appearances.

Q. So if you're looking at a new ultrasound, you can't say, this clot is new, this clot is old, this clot's been here?

A. Well, there are some appearances of an acute deep vein

thrombosis on ultrasound. The vein might be dilated. There might be thrombus echogenic material that you can see that's filling up the vein. But that appearance can in some cases persist for weeks or months. And then it goes through a progression to subacute conditions, where you start getting some recanalization. That means a channel is formed in the blocked vein, and there starts to get some flow, but, again, that appearance can persist for weeks or months and even be a permanent situation in some cases.

So it's not an exact science where you can totally date exactly when something started. And I wish it were, because it would make our job a lot easier.

Q. So Dr. McKinsey disagrees with your opinion or your conclusion -- your opinion that DVTs start in the calf. He says that DVTs start in any vein. Is that accurate?

A. Well, it is true that thrombosis can occur in any vein. The most common veins to be involved are the veins of the lower -- of the leg. And most clots in the lower leg start in the calf, and then they might just resolve or they might extend into the more proximal lengths. That's not 100 percent. Sometimes clots can start in the thigh in certain conditions, like pregnancy or something. But in general, they start in the calf and they progress and move up into behind the knee and into the thigh.

Q. Now, why is the location where they commonly start

important?

A. Why are they?

Q. Why is the location where they commonly start important?

A. The only reason it's important is that, as we talked about before, we try and make the diagnosis as soon as we can, so we can initiate treatment. And the goals of treatment are to prevent the clot from extending, from getting bigger, because if it gets bigger, there are two potential complications: One is that the bigger it is and the more extensive it is, the more likely it is to break off, travel to the lungs, to produce a pulmonary embolism, which can be fatal. And the other reason is that the more extensive it is, the more likely the patient is to develop post-thrombotic syndrome and the more severe the post-thrombotic syndrome is likely to be.

MS. KUNSTLER: One moment, your Honor.

Q. Now, I am handing you what's been marked as Defense Exhibit L. Can you tell me what this is.

A. Yes. This is labeled Exhibit L. And this is an article written by my friend and colleague, Clive Kearon, and describes the natural history of venous thromboembolism. It was published in circulation in 2003. And the first sentence of the abstract of the paper, and of the introduction of the paper, states that DVT usually starts in the calf veins from where it may extend to the proximal veins and subsequently break off -- break free to cause PE, or pulmonary embolism.

And then in the introduction, Dr. Kearon goes on to give some of the fundamental references that document through studies with X-rays of the veins, venography and other studies, that that's indeed how they progress: From starting in the calf, usually, or sometimes in the valve cusps of the veins in the calf, and then extending into the popliteal and more proximal veins. The popliteal vein is the vein behind the knee.

MS. KUNSTLER: Your Honor, I would like to offer Defendant's Exhibit L.

MR. CRONAN: No objection.

THE COURT: Defense Exhibit L is received without objection.

(Defendant's Exhibit L received in evidence)

BY MS. KUNSTLER:

Q. Now, I would like to go back with you for a moment to Defendant's Exhibit F, which is in the binder that you have.

A. Exhibit F, yes.

Q. And I'd also like to, with the government's indulgence, like to hand up Government Exhibit 1, which is the record that -- one page that -- two pages of records. It has the initial record that's the same as our Exhibit F and an additional page.

Can you tell me what the -- well, actually, in reviewing those records with you, in reviewing -- during the

break did you and I look at Government Exhibit 1 together?
A. Yes. Yes, I did. So --
Q. And what did we notice when we looked at Government Exhibit 1 that we didn't notice previously?
A. I do notice that on the -- on 5/16/2010 it looks like the -- Mr. El-Hanafi was examined by an assistant, who then put an assessment, early DVT versus Baker cyst versus other popliteal problems, and then says in the plan, will consult with Dr. Watson in the a.m. And then on the subsequent page, the -- a note dated 5/17/2010, that looks like is now signed by Dr. Watson, says that -- it's hard to read the writing. Doctors have terrible writing. But some pain in the right knee, possible Baker's cyst or transient bursitis. Continue aspirin and ibuprofen.

So that's where it sounds like the aspirin and ibuprofen were continued at that point. And I'm not sure where -- talking about a follow-up examination, but that's what the note says there.
Q. So in looking at that record, it's your testimony that you were incorrect earlier that it was Dr. Watson who made the DVT differential diagnosis?
A. Yes. That's my -- that was my mistake. It was the physician's assistant who gave that differential diagnosis of early deep vein thrombosis versus Baker's cyst versus other popliteal pathology. It sounds like Dr. Watson was falling on

the side of the possible Baker's cyst or bursitis. I think, again, the only way we can be sure would be to do an ultrasound, which would have distinguished amongst all of those possibilities.

Q. And I guess my question is, looking at all of the records in this case, the history of Mr. El-Hanafi's condition, everything that you've examined, does this change anything about your opinion in terms of the quality of care Mr. El-Hanafi received or whether things should have been done differently, or does your opinion remain the same?

A. It really doesn't. As I told you, I don't know exactly when the deep vein thrombosis started, but certainly we have documentation that at least in March of 2011 he was having pain and swelling in the ankle and calf that wasn't responding to analgesics, to aspirin or antiinflammatory agents, ibuprofen, to compresses and so on.

It -- he continued to complain of that in July, and he was examined again in July and found to have swelling in the pain. And that's when the ultrasound was ordered, and then it was not done for two months.

So even if we said that it started in March of 2010, we're still talking about four or five months of ongoing pain and swelling until he gets the ultrasound ordered, and another two months before the ultrasound is done and the DVT is documented. So it's still a delay. So exactly when it

started, I can't say. But it certainly was long-standing by the time the ultrasound was ordered. And there was still a two-month delay before the ultrasound was done.

And if you're doing an ultrasound of the leg, you're doing it to diagnose possible pathology. Otherwise, we shouldn't be wasting healthcare dollars to do a test. So you should be getting that test done promptly and looking for the results.

Q. Thank you.

Now, when you were reviewing Mr. El-Hanafi's medical records, was this delay the delay two months between when the ultrasound was ordered and when it was performed? Did you note frequent delays, or did you notice frequent delays at this time throughout the medical records?

A. In other people?

Q. No, throughout Mr. El-Hanafi's medical records.

A. I mean, yes, because we see at least in March, when he's got symptoms and signs of leg pain and swelling, nothing is done. And then we go until July, when the ultrasound is ordered with those same symptoms, and two months later it's finally done.

MS. KUNSTLER: One moment, your Honor. (Pause)

Q. Now, did you -- do you know what Mr. El-Hanafi has pled guilty to?

A. Do I know?

Q. Do you know what Mr. El-Hanafi has pled guilty to?
A. I do not.
Q. Do you know anything about the crime or the offense in this case or --
A. I did look things up on the Internet about a month ago, but I really don't know any of the details.
Q. Did you know anything about the criminal case when you made the decision to take this case on to be --
A. I know nothing about it.
Q. Did you know anything about it --
A. No.
Q. -- at the time you agreed to take this on?

Would it have made a difference, had you known more about the offense or underlying crime in this case?

A. No. I'm looking at this case purely from the medical point of view, to assess the problem that he has and what to do about it going forward, and to assess the care that he received.
Q. Now, have I shared any legal filings with you in this case, any like legal argument or any legal, you know, documents prepared by lawyers?
A. I have not seen any such documents.
Q. So I haven't provided you with anything that -- anything from the government or from the defense in terms of legal filings?
A. No, you have not.

MS. KUNSTLER: Can you hold on one moment? (Pause)

Thank you. No further questions.

THE COURT: Thank you. Is the government ready to begin examination?

MR. CRONAN: Yes, your Honor.

THE COURT: All right. I would suggest we go until about 1:00 and then take an hour-and-15-minute break.

MR. CRONAN: Sure. Your Honor, I think I'll take the Court up on your invitation to have Dr. McKinsey nearby.

THE COURT: Very well.

CROSS EXAMINATION

BY MR. CRONAN:

Q. Good afternoon, Doctor.

A. Good afternoon.

Q. Now, Doctor, would it be fair to say that DVTs are not uncommon in people?

A. Overall in the general population, one to three out of a thousand people will develop DVT.

Q. You yourself see about 20 patients a day when you're on call who have DVTs?

A. Well, remember that I have what you call referral bias, because I work in a thrombosis clinic. So the patients that are referred to me are patients with either suspected DVT or pulmonary embolism or thrombosis in some other site or patients who have that we're following. And likewise, on patients I see

in the hospital are patients who either have it or are suspected to have thrombosis.

Q. And you see people, obviously, who have post-thrombotic syndrome as well?

A. I do, yes.

Q. People who have thrombosis or DVTs can live normal lives, is that right?

A. Yes, they can. And there is different flavors to deep vein thrombosis. There are clots that occur in association with transient risk factors, like surgery, for example. And those patients do very well after a short course of treatment. And then there are people like Mr. El-Hanafi, who develop DVT with more uncertain risk factors but also have risk factors for recurrent DVT. And that becomes a more chronic condition. And then you're stuck with chronic issues that have to be dealt with.

Q. But even people who face the risk of chronic recurrence of DVTs still can live normal lives with appropriate treatment, isn't that right?

A. They can live normal lives. The thing that can limit the quality of their life are the long-term consequences, such as post-thrombotic syndrome. So post-thrombotic syndrome, especially in the severe form, like Mr. El-Hanafi has, can severely decrease the quality of life and can impair your ability to enjoy a normal life.

Q. You would consider Mr. El-Hanafi to be on the severe end of post-thrombotic syndrome?
A. Yes, he's -- in my opinion, he's on the severe end of post-thrombotic syndrome, based on my examination of him, the things that he told me about what he can do and what he can't do and the Villalta score assessment.
Q. Things that he told you that he can and cannot do, that is by definition based subjectively on what Mr. El-Hanafi told you, is that right?
A. Yes, they are -- the Villalta score looks at a combination of things that he tells me --
Q. So that's subjective as well, and we'll talk more about that.
THE COURT: Don't interrupt.
A. That's subjective about what he says. And also objective of what I see in his leg. So it's a combination of both of those.
Q. One thing you saw in his legs was a measurement of the size of his calf, I believe, is that right?
A. That's -- that's one thing that I looked at, yes.
Q. And you looked at that because that's an indicator as to the severity of the DVTs that Mr. El-Hanafi suffers, and the post-thrombotic syndrome that he suffers from?
A. The extent of swelling is one indicator, yes.
Q. And in Mr. El-Hanafi's case, there's barely any difference

between his left calf and his right calf, isn't that right?
A. In my book a two-centimeter difference is not barely any difference.
Q. Talking about two centimeters, which is less than an inch, is that right?
A. Two centimeters, but, still, it's a difference in size that is in my book a significant indicator of post-thrombotic syndrome. And when I -- it's only one indicator on the scale. And, sure, he could have had more difference, but that's after he's wearing the stocking for most of the day, and he just took it off for about an hour before I saw him. So that's at its best. I'm sure that if I had looked at him at the end of the day without a stocking, it would be worse. And two centimeters is still two centimeters. That's a significant difference.
Q. I'm sure you've seen patients with far, far worse, Doctor, is that right?
A. There are patients who have worse swelling, correct. But, still, as I look at all the criteria on the Villalta score, he fits for what is by definition severe PTS.
Q. Have you seen patients, for example, where one leg might be almost twice the circumference of the other leg?
A. I have seen the whole gamut of things in my practice.
Q. So for that type of patient, you'd be looking at a difference of about 30 to 40 centimeters, isn't that right?
A. No, not that much. You might be looking at a difference of

five centimeters or six centimeters, not 30 centimeters.
Q. You've seen patients whose condition required invasive surgery, is that right?
A. With all due respect to Dr. McKinsey, the number of patients that I sent for surgery for post-thrombotic syndrome is small. Unfortunately, there's -- the sorts of surgeries that can be done to help that condition are somewhat limited. But I do see patients who develop ulcers. Fortunately Mr. El-Hanafi does not have any ulcers, because those can be difficult to heal. But he is susceptible to venous ulceration.
Q. His condition, Mr. El-Hanafi's condition right now, is not so serious that you would recommend any sort of aggressive or invasive surgery, would you?
A. I don't recommend surgery for very many patients, no matter how serious the post-thrombotic syndrome is. I might recommend some measures to heal ulcers. Right now his condition, in my opinion, is that of severe post-thrombotic syndrome.
Q. You mentioned the reporting that Mr. El-Hanafi gave to you regarding his condition, and then one of the things you mentioned was that he said he's unable to run or jog. Is that right?
A. He told me in the examination yesterday and in our discussion, he told me that if he's trying to exercise and tries to do deep knee bends or tries to jog, he cannot do those without a lot of pain and discomfort.

Q. Is there testing to determine an individual's ability to run or jog with a condition?
A. I'm not aware of any objective test to really do that, because it would be limited by discomfort. And he clearly -- clearly he's telling us that he has discomfort if he tries to do those things.
Q. Now, you recommend treatment for Mr. El-Hanafi's condition going forward, whether in prison or out of prison, is that right?
A. I'm not sure what you mean by "treatment."
Q. Sure. Well, you recommend anticoagulation therapy, correct?
A. I recommend anticoagulation treatment, yes.
Q. I believe you mentioned in one of your reports -- I'm going to likely mispronounce this word, but Rivaroxaban treatment?
A. I raised that as a potential option for Mr. El-Hanafi to try and get away from the daily injections that he's currently getting with the Lovenox, that low molecular weight heparin. I'm a little bit worried about Rivaroxaban, because there's not a lot of data about its use in patients with antiphospholipid syndrome. I am aware of studies that are ongoing, and I know the results of some of those studies, but they haven't yet been published. I think it might be an option for him in the future to get him away from the needles. That's all I was thinking.
You can see the pictures we saw this morning of the

bruising of his abdominal wall. It's not very comfortable for anyone to be on injections every day for the rest of their life. So it would be nice to be able to offer him something in the way of a pill, instead of an injection.

Q. And there would be oral options for Mr. El-Hanafi from --

A. Well, we don't have -- there could be oral options. We don't -- he was on Warfarin, Coumadin at one point, but there was difficulty controlling the level of anticoagulation. I don't think it's a great option for someone in the prison setting. And so I was exploring other potential options, how good they would be for him. I don't really know. We need more data.

Q. And the injections, those are injections right beneath the surface of the skin, is that right?

A. These are given under the skin, yes.

Q. Obviously it's not desirable, but a lot of people, unfortunately, have to inject themselves because of medical conditions, isn't that right?

A. Well, yes. I mean, a lot of people have to inject medications under the skin. For example, let's think about a diabetic who might inject insulin. But insulin isn't an anticoagulant. So you're injecting an anticoagulant under the skin, which increases the risk of bleeding at the injection site. And of course you have a systemic, a whole body anticoagulant effect, which increases the risk of bleeding.

THE COURT: Could I interject for a moment.

You said that the injections increase the risk of bleeding at the site. If the injection is done properly and is simply subcutaneous, does that, nonetheless -- is that accompanied by a higher risk of bleeding at the site?

THE WITNESS: So, your Honor, if the local -- if the injection is done correctly, properly, with great care, the risk of local bleeding is reduced. But you can imagine that you're giving the anticoagulant, and it gets into the bloodstream, and now you've anticoagulated the blood. If you have trauma, even blunt trauma to your chest, you hit your head, you're going to be more prone to internal bleeding because you have your blood anticoagulate.

THE COURT: I understand that.

THE WITNESS: But the local bleeding, yes, the risk is reduced if it's done carefully and properly.

THE COURT: Now, we have seen photographs of Mr. El-Hanafi's chest or abdomen that show bruising. Is that in your view the result of improper injection?

THE WITNESS: You know, that's a good question. The -- I think you can minimize the bruising. And if you feel his abdomen -- I couldn't really get that in the pictures, but there are lumps there which are at the injection sites. You can minimize the bruising and minimize the formation of those lumps, which are really just bruises under the skin, by more

attention to the injection technique to make sure that there's pressure put onto the site after the needle is taken out. All of those measures can reduce it. I have patients who are on injectable anticoagulants like Mr. El-Hanafi for, unfortunately, months or years. And sometimes the abdomens look like his. Sometimes they look almost spotless. So technique is important.

THE COURT: Thank you.

BY MR. CRONAN:

Q. And the medication he's injecting into himself now is Lovenox, isn't that right?

A. That's the medication that he's on right now, is Enoxaparin, or Lovenox.

Q. And for an individual who has -- who is injecting himself with Lovenox, what is the reported rate of internal bleeding?

A. You know, we don't have a good record of that because there aren't a lot of people on long-term Lovenox injections. The sorts of patients that we keep on long-term low molecular weight heparin, such as Lovenox, they're usually people who have, in the case of venous thrombosis, usually people who have venous thrombosis in the setting of cancer. And those patients have a risk of major bleeding of about 5 percent per year.

I would think that because Mr. El-Hanafi doesn't have underlying cancer, his risk of major bleeding is going to be lower than that. I would say that we mostly quote rates of

about 3 percent per year in patients who have long-term anticoagulant therapy with either Lovenox or Warfarin. Because he's younger, that rate may be as low as 2 percent per year.

THE COURT: If you could pause just a moment. Thank you.

Q. And Mr. El-Hanafi doesn't have a history of bleeding that you're aware of?

A. No. There's no particular history of bleeding.

Q. And Lovenox is not a medication that's used rarely, is that right?

A. That?

Q. That is uncommon. It's a common medication?

A. Yes, it's commonly used, most commonly used for prevention of venous thromboembolism in low doses, in prophylactic doses or low doses. It's less commonly used for long-term treatment, as I said, except in patients with cancer, or in his case, because I guess the Warfarin wasn't a good option for him.

Q. Well, it's frequently used, for example, for patients who are pregnant, is that right?

A. Yes, it could be used for treatment, for prevention or treatment of venous thromboembolism in women who are pregnant.

Q. And you have not ruled out whether or not Mr. El-Hanafi could switch to oral medication in the future, have you?

A. Well, he's been tried on Warfarin and not done well on that. And he was briefly on Rivaroxaban or Xarelto, and it's

unclear whether or not he had a recurrence on that. So I think with those two bits of history, I'm not sure that I would be in a rush right now to switch him to an oral option.

Q. And whichever course of treatment he ends up pursuing, he ends up receiving, that would be the same course of treatment whether he's in a prison environment, in a federal medical facility or at liberty?

A. Yes, you're right. Whatever treatment is decided upon, he would require that whether he's in the prison environment or out in the community. But I think in the prison environment, there are other risk factors for bleeding that wouldn't exist in the community environment. I think the prison environment, first of all, there is the possibility of fighting and getting involved in altercations that might be associated with injuries that could lead to serious bleeding. And, of course, if a bleeding -- if a bleed does occur -- and a bleed could occur with uncontrolled hypertension; his blood pressure isn't being controlled -- puts you at risk for stroke, for hemorrhagic stroke, and you're on a blood thinner, an anticoagulant, that increases your risk.

So the prison environment is certainly a less safe environment for someone who's chronically anticoagulated than a community environment, where you can avoid those sorts of altercations, where you can seek rapid medical attention. We saw that getting an ultrasound took two months. I'm not sure

how long it would take to get other forms of medical care in a prison setting. So I'm not sure that that's the best setting to be on long-term anticoagulation.

Q. You reviewed a lot of his prison medical records --

A. Yes, I have.

Q. -- going back to May 2010, is that right?

A. Yes.

Q. In those four-and-a-half, more than four-and-a-half years of records, have you seen any indication that he had a physical altercation at the Metropolitan Correctional Center?

A. I haven't seen any of that so far, no.

Q. And people get in fights outside of prison, too, right?

A. Even?

Q. People get into physical fights outside of prison?

A. I'm sure they do, but I would guess that it's a lot more common in prison than outside of prison.

Q. Car wrecks are more common outside of prison than in prison? Car accidents are more common outside of prison than in prison?

A. I would think that car accidents are more likely outside than inside.

Q. Knife cuts could happen inside of prison or outside of prison?

A. Correct.

Q. Now, Doctor, I want to talk to you a little bit about

Mr. El-Hanafi's blood pressure. Do you have Defense Exhibit D1 in front of you?

A. I don't. I don't think so, no. Yes. Okay. I've got it now.

Q. Do you see around midway through the first page there, there's a list of blood pressure tests that are done on October 15, 2014, four of them on that day, and then November 19, 2014?

A. I see the ones -- yeah, I see one on the 19th and four on the 15th.

Q. People often have elevated blood pressure when they see a doctor than when they normally do; would that be fair to say?

A. Yes. There is what we call white coat syndrome, where the doctor walks in with a white coat and the blood pressure goes up. And we see that from -- that the blood pressure is done, say, on the 10/15. They varied from diastolics of a high of 107 to a low of 96. But even 96 is still elevated.

Q. And what about on November 19th, about a month later, when the blood pressure was at 80, the diastolic was at 89?

A. That's right.

Q. Where would you place that blood pressure on the scale of high, moderate to low blood pressure?

A. That's moderately -- that's increased. It's higher than it should be in a young man of Mr. El-Hanafi's age, but certainly not as worrisome as a diastolic pressure that's in the high 90s

or over 100. All I'm saying is the target for him should be lower than it would be if you had hypertension, because he's on a chronic anticoagulation therapy. We want to keep it as low as possible to lower his risk of bleeding.

Q. Now, the high blood pressure, though, is not a consequence of the deep vein thrombosis, is it?

A. It -- it likely isn't, but it's possible that the antiphospholipid syndrome could be contributing to the kidney impairment, his renal function, and that kidney impairment in turn could cause the hypertension. So sometimes it's difficult to know what's the chicken and what's the egg. Those two are possibly related. But with antiphospholipid syndrome, there can be thrombosis in blood vessels in the kidneys, which can then cause hypertension and can cause impairment in renal function.

Q. Now, the antiphospholipid syndrome, that also is not caused by a DVT, is that right?

A. No, it's the other way around. The antiphospholipid syndrome probably contributed to the development of the DVT and certainly puts him at risk for recurrent DVT, if he were to stop anticoagulation therapy.

Q. And that syndrome, the antiphospholipid syndrome, is someone born with that?

A. No. It's an acquired -- that means we gain it. And it's an acquired abnormality. It can occur early on in life. It

can be secondary to diseases, such as Lupus or rheumatoid arthritis, or can occur in the absence of those disorders, like in Mr. El-Hanafi's case. So he has what we call primary, where -- because it's not secondary to some disease, primary antiphospholipid syndrome.

Q. Now, you mentioned a bit about possible renal impairment that Mr. El-Hanafi may be developing. Is that a consequence of having a DVT?

A. Not -- not so much of having the DVT, but, again, as I said, it could be contributed to the -- to by the antiphospholipid syndrome, which is -- could be contributing to the DVT. So that's the way that they can be interconnected.

Q. And I believe you testified Mr. El-Hanafi is scheduled to see a nephrologist for the renal issue?

A. I don't know -- and I guess he's got the clearance to see a nephrologist, but the way things work in the prison system, from what I've seen, that might take several months.

Q. And obviously there's medication for elevated blood pressure, right, and there's medication for a renal condition, if he does have one?

A. I'm not sure that there would be specific medication for the renal condition, but certainly one of the key parts will be to control the blood pressure. And I would hope that the nephrologist will be looking for any other potential causes and put him on medications that will do perhaps a little better job

of managing his blood pressure.

Q. And could that medication be taken in conjunction with the anticoagulation medication?

A. Yes. Yes.

Q. Now, Mr. El-Hanafi had a genetic predisposition to developing DVTs, isn't that right?

A. He has a hereditary biochemical disorder called factor five Leiden. You can carry two genes for that, one from mom and one from dad or just one. He has just one, so he's what we call heterozygous for that mutation. Factor five Leiden is a weak risk factor for deep vein thrombosis or pulmonary embolism. It increases the risk about twofold, but it is definitely a risk factor.

Q. And how much does his antiphospholipid syndrome increase the risk factor for DVTs?

A. Yeah. The antiphospholipid syndrome is a much more serious risk factor for recurrence. And that's going to increase your risk probably in the range of 15 to 20 fold.

So just to put that into perspective for you, if a person had a DVT after surgery and required anticoagulation, whether or not they had the anti -- whether or not they had the factor five Leiden mutation would not influence my decision on how long to treat them. And if Mr. El-Hanafi had just that abnormality, that wouldn't be a determinant on its own of how long to treat him. But the antiphospholipid syndrome is much

more of a risk factor for recurrence than the factor five Leiden mutation.

Q. And Mr. El-Hanafi is in good physical shape, is that right?

A. Is in good?

Q. Otherwise.

A. He's in -- I mean, he's young and appears to be pretty healthy, aside from his antiphospholipid syndrome and his hypertension. He could use a little more physical toning.

No offense, Mr. El-Hanafi.

But it's difficult for him to do that because he can't -- he's trying to exercise, but he's restricted because of his post-thrombotic syndrome. He can't jog comfortably, even doing knee exercises, as your Honor pointed out. He could do more upper body strengthening exercises, but cardiovascular stuff will be difficult for him.

Q. What about four-and-a-half, five years ago, when he was in his early, mid30s?

A. What about?

Q. Four-and-a-half, five years ago, when he was in his early or mid30s, without any indication of -- would someone in their mid30s in good health, not overweight, absent some other abnormality, be likely to develop a DVT on a longer plane flight?

A. On a -- without an anti -- you're just saying what's their likelihood?

Q. The likelihood of someone in their early to mid30s developing a DVT on an airplane flight that is, say, 12 hours.
A. You know, we hear a lot about DVT and long flights, but if you think about how many people travel long distances, it's not that common. But it does occur. And the ones we hear about are the people who are well known personalities, like Serena Williams, who developed a DVT on the -- after an even shorter flight.
Q. And is the likelihood of developing a DVT on a flight reduced if the person is able to get up during the flight, such as to go to the bathroom or move around?
A. Absolutely. It's reduced. We have what we call -- often the DVT associated with long flights is called economy class syndrome, because people in economy class are stuffed in the corner and they can't clamor over their seat mates to get up or go to the bathroom or walk around. And you can imagine that if you're in restraints, or if you're surrounded by two bulky guards, you're not going to be able to move your legs and exercise and reduce your risk of deep vein thrombosis. And every booklet you have in the seat pocket of your airplane tells you about doing exercises with your legs, but nobody ever does them, except for me.

MR. CRONAN: Your Honor, do you want me to keep going.

THE COURT: We can keep going for, say, another 20 minutes.

Q. Let me ask you a little bit about the symptoms of the deep vein thrombosis. What are some of the symptoms, some of the main symptoms of a deep vein thrombosis?
A. Well, typically people will have pain and swelling. If it's in the leg, they'll have pain or swelling in the leg. It often starts with swelling in the ankle that might proceed to involve the calf. They can have warmth of the skin. They can have dilatation of the superficial veins. They can have discoloration of the skin. It can be red or it can sometimes be bluish in color. And the area tends to be tender to touch. And they can have difficulty walking with pain when they try and walk. Those are some of the typical symptoms and signs.
Q. Now, musculoskeletal pain in and of itself, do you consider that to be an indicator of deep vein thrombosis?
A. No. When we have a person with -- who presents with leg pain, we have to do a differential diagnosis. And in the differential diagnosis there might be included, might be musculoskeletal causes of the leg symptoms. It could be the Baker's cyst. If a Baker's cyst ruptures and cyst of the synovial fluid travels down the leg, it can cause pain or swelling. So there's lots of things to consider in the differential diagnosis of someone who presents with leg pain.
But someone who has pain and swelling in the leg that's getting progressively worse and not responding to analgesics, antiinflammatories, stretching, compressing, etc.,

I think you have to start thinking about other pathologies. And I certainly would have DVT in my differential diagnosis.

Q. What about pain in a joint area? Is that an indicator of a DVT?

A. If the pain is really localized to the joint only, there's no swelling in the calf or the ankle and you can reproduce the pain completely by just moving that one particular joint, that would make my likelihood of deep vein thrombosis -- it would certainly go lower on the list.

Q. Now, on direct examination you spoke a bit about some Bureau of Prisons records for a medical visit that Mr. El-Hanafi had on May 16, 2010. Do you remember that?

A. May 16, yeah.

Q. I believe it's Exhibit F or Government Exhibit 1?

A. F, I've got it here. Yes.

MR. CRONAN: Your Honor, on direct we admitted Exhibit F. Exhibit GX1 is two pages of that exhibit. We would just more for both pages to be offered.

THE COURT: All right. As Exhibit 1?

MR. CRONAN: Yes, your Honor.

THE COURT: I take it no objection?

MS. KUNSTLER: No objection, your Honor.

THE COURT: Government Exhibit 1 is received without objection.

(Government's Exhibit 1 received in evidence)

BY MR. CRONAN:

Q. Do you have that exhibit in front of you, Doctor?

A. Yes, I do have it here.

Q. I believe, as you mentioned on direct, the notation for May 16, 2010, was by a physician's assistant, is that right?

A. That's what it looks like here. I can't read the signature, but the last line there says consult with Dr. Watson in the a.m. So I assume that it's a physician assistant, but I can't be 100 percent sure.

Q. And I believe, if you look to the first notation on May 13th, there's a mention of an E-B-A-R-B-Y, comma, PA. Do you see that, in type? Maybe five lines down?

A. Oh, yeah. Okay. Yeah. Yes. Okay. I've got a circle around that, so, yeah, I see that. So that's a physician's assistant.

Q. Now, the notation for May 16, 2010, mentions pain in the back of the knee, is that right?

A. Pain in the back of the knee?

Q. For that notation, maybe?

A. Then in the calf. There is more pain in the back of the knee than in the calf. Doesn't say that there isn't pain in the calf. It just says that there's more pain in the back of the knee.

Q. More pain in the back of the knee?

A. Than in the calf.

Q. It mentions pulsive, or good, I believe, or pulses -- yeah, pulses are all good. Do you see that, the next line after pain in the calf?

A. Yeah. Pulses are all good. Yeah.

Q. What is -- and do you know -- do you have an understanding of what that means?

A. Yes. I would guess that that physician's assistant measured the pulses in -- presumably in the groin and in the feet, and perhaps in the popliteal area, to make sure that the arterial supply to the leg is good.

Q. That --

A. Doesn't help at all for veins.

Q. And is there any mention of swelling in this notation?

A. I don't see any mention of swelling in this examination. Just the pain that's worse in the back of the knee than in the calf.

Q. And is there any mention of discoloration of the skin in this notation?

A. I don't see any mention of that.

Q. What about tenderness? Do you see any mention of tenderness?

A. Again, it just says pain in the back of the knee is worse than in the calf. I don't know whether that's pain, but the patient describes the tenderness that the physician is eliciting.

Q. Would it be fair to say that there's no indication in this note that Mr. El-Hanafi was presenting as a high risk or likelihood of DVT?

A. The physician's assistant put in the differential diagnosis under assessment early DVT versus Baker's cyst versus other popliteal problems. So the physician assistant was thinking about those three things, and the first thing that he or she put down was early DVT.

Q. Well, I appreciate that, Doctor. I'm asking you as an expert in this area, if you were presented with someone who complained of pain in the back of his knee more so and then less so in the calf, no swelling, no discoloration of the skin and no tenderness, would you have assessed that individual, that patient, to be presenting a high likelihood of having DVT?

A. It's difficult to say without having examined the patient at that time to actually see it for myself. But certainly the physician's assistant had that in the differential diagnosis.

Q. If someone comes in to you -- we can put aside what's written in this notation. If someone comes in to you and complains of pain in the back of their knee, less pain in the calf, and no indications of swelling, tenderness or skin discoloration, do you refer that person for an ultrasound to determine if they have DVT?

A. It's impossible for me to say without a little bit more information, but I certainly would agree that it might not be

the highest probability for DVT at that time.
Q. Would it be fair to say that every time a patient comes in to you and complains of leg pain, you don't refer that patient for an ultrasound?
A. I see a lot of patients with leg pain, because that's what I do. What I do is I do a Wells score to determine the pretest clinical probability, and there isn't enough information here for me to really determine what the Wells score might be.
Q. Doctor, do you have Defense Exhibit I in front of you? It's a July 16, 2010, report from the Bureau of Prisons.
A. I've got it here, yes.
Q. Now, on page four on direct examination, I believe you mentioned that swelling was indicated, on the bottom of page four?
A. On the bottom of page four, under musculoskeletal general, it said swelling, and then in parentheses it says, yes.
Q. Is there any indication of where there was swelling?
A. On page eight of that same document, it says right leg previously swollen since restraint was put during inmate's transport from Oklahoma. And on page ten of that report, it says, pain in joint lower leg, and it talks about the prescription of the ibuprofen and the aspirin. So if we -- there's pain in the leg, there's swelling, and it appears to be in that leg.
Q. Now, the comment you just referred to, right leg previously

swollen since restraints were put during inmate's transport from Oklahoma, do you know whether that was a report -- information reported by Mr. El-Hanafi or if that was an observation by the treating physician?

A. I don't -- I don't know. I can't tell. It's -- I don't know. It sounds like it's written by the physician assistant, but I don't know where that's coming from. But the indication for the analgesics and the inflammatories for pain and joint and lower leg and -- I don't know whether that came from Mr. El-Hanafi or came from what the --

Q. The prescription?

A. -- person observed.

Q. The prescriptions are for pain in joint, not swelling, right?

A. Well, of course the analgesics and antiinflammatories won't do anything for swelling, but they will help to relieve pain. But they do talk about swelling both in that musculoskeletal, which is -- and in that other comment.

Q. And in that comment it says, right leg previously swollen, is that right?

A. Well, previously swollen since restraint was put on. So that sentence makes me think that it was previously swollen and it's been swollen since that restraint was put on after transport. But it's certainly open for interpretation.

Q. Well, the medical term for swelling is -- can be edema,

E-D-E-M-A, is that right?

A. That's -- that's a medical term, but I see doctors write swelling or edema, yeah.

Q. Edema means swelling, though, right?

A. Edema means swelling.

Q. On page eight, maybe about ten lines above the comment, right leg previously swollen, isn't it reported on the record here that there's no edema in the right lower extremity or in the left lower extremity?

A. It just says that the right leg previously swollen since the restraint. We have -- swelling under musculoskeletal is yes, and review of symptoms. So I'm assuming that there's swelling now.

Q. Well, on page eight, do you see where it says extremities, colon, about midway down the page?

A. Yeah.

Q. And then the third and fourth line?

A. It says -- yeah, it says none there.

Q. For edema in the right extremity or in the left extremity?

A. Yep.

Q. Do you have Exhibit 3?

A. I'm sorry?

Q. I'm sorry. Do you have Exhibit J, rather, in front of you? That's a March 11, 2011, report?

A. March? I'm sorry. I don't know what you're --

Q. Defense Exhibit J, it's a dated March 11, 2011.
A. Yes, all right. I've got that.
Q. Now, here there's a report of swelling, is that right?
A. Yes.
Q. Mr. El-Hanafi reported swelling from the right ankle to the calf, is that right?
A. That's what it says.
Q. Now, page two of this report contains the results of an examination, is that right?
A. That's what it appears to be, yes, under musculoskeletal.
Q. And that would be an objective examination as opposed to subjective reporting from patient?
A. Yeah. From the symptoms that the patient is describing, this looks like it's part of the physical examination, yes.
Q. And noted swelling noted on the right ankle, right?
A. So swelling noted on right ankle, tenderness of calf area and popliteal area, noted prominent veins on the foot and ankle areas and full range of motion. Sorry.
Q. Now, there is no indication of swelling in the calf over here, is that right?
A. There's swelling in the ankle and tenderness in the calf and popliteal.
Q. And swelling in an ankle could be caused by a variety of things apart from a deep vein thrombosis, is that right?
A. Swelling in the ankle could be caused by a variety of

things, but the tenderness in the calf and the popliteal area suggests that it's not just something localized to the ankle.

Q. Standing all day, for example, could cause swelling in that area?

A. Sorry?

Q. Standing all day could cause swelling in the area?

A. It -- it might, but it wouldn't cause the tenderness in the calf. It wouldn't cause the prominent veins on the foot and the ankle.

Q. And if swelling was caused by DVT, wouldn't more than just an ankle be swollen?

A. If you start with a calf DVT, so the clot is localized to the calf, it's not at all uncommon to start to have the swelling that first involves the ankle and then extends to involve over time, would extend to involve the calf, but the tenderness that's in the calf area and the popliteal area. And that swelling would certainly make me worry about the possibility of DVT.

Q. Would a DVT result in the entire foot being swollen as opposed to just the ankle?

A. It might be, or it could just be that you see puffiness in the ankle, and that there is swelling in the foot. It's hard to know. I wouldn't say that the level of detail in any of these notes is very extensive, and would not pad -- if my medical students gave me notes like that or my residents, I

would probably hand them back to them.

Q. Would a local injury, such as an injury to an Achilles tendon, would that be consistent with the symptoms that are reported here?

A. Again, an Achilles tendon problem might give you localized ankle pain and tenderness along the Achilles ankle, but it wouldn't give you popliteal pain. It's unlikely to give you even swelling. It's possible it could, but, again, Achilles tears are really difficult. You can't move your foot. I don't know.

THE COURT: This might be a good stopping point.

MR. CRONAN: Yes, your Honor.

THE COURT: It's now 1:30. Let's resume at 2:45. Thank you.

(Luncheon recess)

AFTERNOON SESSION

2:49 p.m.

THE COURT: I'd like to ask counsel, roughly how much longer do you expect to be?

MR. CRONAN: Your Honor, I do not have much longer. To be conservative, I would say 20 to 30 minutes, hopefully less than that.

THE COURT: Okay. I'm not meaning to rush you, but I have read the documents myself.

MR. CRONAN: And we definitely want to finish today, given our doctor's schedule.

THE COURT: I'm sure. I'm sure you do.

Okay. We are then ready to resume.

MR. CRONAN: Yes.

THE COURT: Could you come forward, please.

MR. CRONAN: I apologize. Mr. Lockard will be joining the table midway through this.

THE COURT: Dr. Weitz, I remind you that you're still under oath.

BY MR. CRONAN:

Q. Doctor, do you still have exhibits in front of you?

A. Sorry?

Q. Are there exhibits still in front of you?

A. Are there?

Q. Exhibits, the documents.

A. Yes. Some. I've got some here. Which one are you looking for?

Q. Exhibit J.

A. I've got Exhibit J here.

Q. Now, we were talking about Exhibit J before we broke. I've got a couple of other questions.

With respect to the notation on page two regarding swelling on the right ankle, when you see swelling secondary to a DVT, swelling that results from a DVT, what causes that swelling?

A. Typically the swelling is caused by obstruction of flow out of the leg. It can be partial obstruction or complete obstruction of flow, but some obstruction for blood flow out of the leg.

Q. Blood backs up?

A. In a way, yeah, blood backs up.

Q. Then it drains outside of the vein, would that be accurate?

A. It can. And of course if you elevate the leg in early deep vein thrombosis, the drainage is helped. So at the beginning, the elevation might improve things.

Q. And if the leg is not elevated, in what direction would the drainage go, up or down?

A. Well, obviously the gravity makes things go down. So you're going to get the most accumulation of the swelling in

the ankle and foot, and it's going to be worse if you're standing and walking, as is the pain.

Q. If there is a DVT in the ankle that causes swelling, wouldn't swelling, therefore, go down to the foot area?

A. It might, but it doesn't always go down into the foot, no.

Q. Go to the next exhibit, Exhibit K --

A. Yes.

Q. -- which is a March 30, 2011, report. Do you see that?

A. I've got it.

Q. Now, at the bottom of the first page there is an indication under musculoskeletal, ankle, foot, toes, indicating swelling and ecchymosis?

A. Ecchymosis.

Q. Ecchymosis means bruising, right?

A. Bruising, yes, or discoloration. It's hard to know. Typically ecchymosis means bruising, but it could be -- mean some discoloration. I don't know.

Q. With a DVT, do you get ecchymosis?

A. You don't tend to get ecchymosis bruising, but you can get discoloration, which to some could look like bruising. And I think we saw earlier this morning pictures of the ankle where there's discoloration. And that could be in some people's eyes seen as ecchymosis, when really it's that hemosiderin definition that we talked about. But somebody might call that ecchymosis.

Q. Can you get ecchymosis with a sprained Achilles tendon?
A. I suppose not a sprain so much as if you had a tear to the Achilles tendon or a partial tear, you might get some bleeding in that area. I'm sure you could get -- but you'd have a lot of bruising, not -- I think that would be a little bit different, because if you really have damage to your Achilles tendon, you have difficulty flexing your foot.
Q. Let's go to the next record, which I believe is Exhibit -- I think it will be out of order alphabetically, but Exhibit G, which is the July 27, 2011.
A. Yes.
Q. And I believe you testified about this one on direct examination?
A. That's correct.
Q. And I believe you testified you had ordered an ultrasound based on what you saw in this record, is that correct?
A. Yes, an ultrasound was -- was ordered at this date. And I think that I would have ordered an ultrasound as well with someone who had chronic pain in the right lower leg that was going on for months and that didn't respond for -- to a variety of nonspecific treatments.
Q. Now, this report indicates -- does not indicate any swelling, does it?
A. No. There's no mention here of any swelling in the actual report.

Q. And it mentions -- in fact, it mentions -- what does pitting edema mean?
A. That means swelling that if you press on it, it leaves an indentation.
Q. And this report mentions no pitting edema, is that right?
A. That's correct.
Q. And also no calf tenderness, calf redness, warmth or edema?
A. That's what it says.
Q. So there's no calf swelling indicated in this report?
A. Not that's recorded, no. They do talk about the pain.
Q. And this report I believe notes also that Mr. El-Hanafi is able to walk on his heels and toes without difficulty, do you see that? The line under no calf, redness, warmth or edema?
A. Yes. That's true. It also says, though, on the previous page that he reports that he has pain in the forefoot and calf, and it reaches a level of 10, which is the highest level of intensity when he walks for long periods of time. So just standing on your heels is not walking for a long period of time.
Q. Well, if someone is suffering from a DVT in their ankle or in their calf, would they be able to walk on their toes or their heels?
A. It's very variable, depending on the patient.
Q. And this report also notes no history of family or personal DVT, right?

A. I'm not sure that it's this report.
Q. On page one, at the end of --
A. That's right. No history of DVT, self or family. So no prior history.
Q. Now, Mr. El-Hanafi's hypercoagulability preceded his arrest, is that right? His arrest -- preceded May 2010?
A. Well, we know that his factor five Leiden mutation is hereditary, so he would have been born with that. We don't know the onset of the antiphospholipid syndrome because that wasn't tested for until after he was diagnosed with the deep vein thrombosis. So the onset of that one, I don't know exactly.
Q. Is there a direct test for antiphospholipid syndrome?
A. Is there a, I'm sorry?
Q. Direct test for whether or not someone has antiphospholipid syndrome?
A. It's not just one test. It's a constellation of findings to make that diagnosis. You have to have evidence of thrombosis, of clotting, which he has, and you have to have some positive blood tests, that Lupus anticoagulant test and anticardiolipin antibody and some other test to show the antiphospholipid antibodies that are positive on tests done at least three months apart.
Q. You would agree, though, it's not within the standard of care to test a patient as a matter of course for factor five

Leiden mutation?

A. I wish that you were right. Unfortunately, I see a lot of patients that get tested for factor five Leiden and for antiphospholipid antibody as a matter of course when they present with a venous thrombosis with DVT, particularly someone who presents at a young age. And my definition of "young" gets pushed further and further, but I would say that someone who has their first episode of DVT when they're in their 30s, that's a young age. It's not at all unusual for those sorts of patients to have thrombo -- what we call thrombophilia testing, which includes the factor five Leiden and anticardiolipin antibodies and more specific tests.

Q. I should be more specific. For a patient who has not yet revealed the presence of a DVT --

A. No.

Q. -- is it normal to test for a factor five Leiden?

A. You wouldn't do that unless they have the DVT.

Q. Now, DVTs progress through stages, is that right?

A. DVT -- I don't think I understand.

Q. Let me ask that better. A DVT starts with being fresh or acute, right?

A. I think you're confusing what an ultrasound examination might show versus what a patient with DVT presents with. So a patient with DVT has DVT, we treat it, and the reason we treat it is we want to prevent it from getting bigger. We want to

lower the risk of having a pulmonary embolism, and in some cases the DVT resolves, the ultrasound shows complete restoration of flow. In other cases it doesn't resolve.

Q. So the thrombus, the blood clot starts as being acute, is that right?

A. Well, anybody who comes in with symptoms of pain and swelling in their leg, that -- and you diagnose a DVT, yes, we'd say that's an acute DVT.

Q. It then progresses to subacute and --

A. We don't -- I don't use that terminology because it's not helpful for me.

Q. Well, it progresses eventually to the point of being chronic, is that right?

A. Again, it's not a helpful diagnosis because it really -- the only thing that's helpful for me in assessing a patient with DVT is, have I given them adequate treatment for their DVT, which means the duration of anticoagulation where I assess at different intervals whether -- what's their risk of recurrence if I stop anticoagulation versus their risk of bleeding if I continue. And I make decisions. I don't -- I don't use this acute, subacute, chronic. They're not helpful definitions for me.

Q. Well, Doctor, when a thrombus is in the vein --

A. Yes.

Q. -- as it progresses, it matures and becomes incorporated

in the vein, almost like it becomes part of the wall of the vein, isn't that right?

A. That can happen in some cases. It doesn't happen in all cases. Some clots remain totally occlusive for months. Some clots totally resolve over weeks or months and they disappear. Others, yes, go through that progression that you've just mentioned, where they come -- become adherent to the wall of the vein. And you recanalize. You get some flow.

Q. And when it becomes adhering to the wall of the vein, is that sometimes called a mural thrombosis?

A. Sometimes that can be called on the wall, like a mural, yes.

Q. And when that happens, that DVT no longer runs a risk of breaking off and going into the lungs, isn't that right?

A. I think that the risk is lower, but there's also still, with that clot, that residual clot in the vein, that has been associated with an increased risk of recurrence.

Q. Have you ever seen a mural thrombosis break off and go to the lungs?

A. You know, the thing is that I don't do repeated ultrasounds every few months in my patients unless it's going to change my course of treatment. So, I mean, it's much less likely, I agree, that if you've got -- find it adherent and it stays the same, the chance of it breaking off is lower. But those patients are also at risk for getting recurrent thrombosis on

top of that, which can break off and embolize.

Q. Understood. They're at the risk of a new thrombosis. I'm focused on the one that's embedded on to the vein.

A. It's less likely to embolize at that point, I agree.

Q. Now, have you reviewed a recent ultrasound for Mr. El-Hanafi?

A. Have I?

Q. Reviewed a recent ultrasound?

A. How recent?

Q. Well, what's the most recent you've reviewed?

A. I can't remember the exact date on the most recent one.

Q. In the most recent one you reviewed, what was the nature of his DVT condition?

A. Well, it's more of the appearance of some flow around the clot. So it's more the appearance of that mural thrombus with residual abnormalities in the vein. And as I said, residual abnormalities in the vein have been associated in some studies with a high risk of recurrence.

Q. Now, Doctor, you testified on direct about the Villalta scale that you administered at the jail yesterday, do you remember that?

A. Yes.

Q. And this assessment, if I understand correctly, is two parts: The first part is the patient's reporting, and the second is your observations; is that accurate?

A. That's correct.
Q. And the patient reports his or her level of discomfort, pain that he is experiencing at that point, is that accurate?
A. Yes. It's discomfort, itching, pain, right, pins and needles sensation.
Q. Leg heaviness?
A. Sorry?
Q. Leg heaviness, something else. And all those are subjective reports, right?
A. They -- they are subjective measures, and the way the scale tries to adjust for this subjectivity is to use a sliding scale of severity, much like we've talked about, with these pain measurements that go from zero to ten, you try and assess them. Here, it's zero to three.
Q. But even so, what one person considers pain level ten, another might consider pain level seven?
THE COURT: I think I've taken that point. Thank you.
Q. And Mr. El-Hanafi's reporting for those five factors resulted in 13 out of 15, is that right?
A. Yes. I think that's what I said.
Q. Three severe and two moderate?
A. Right.
Q. And that score alone, in your view, would have resulted in a rating of severe post-thrombotic syndrome?
A. That score would have, but so would the score that I got on

the objective findings. That alone would have also put it in the severe category.

Q. Wouldn't you consider the ability for someone to exaggerate pain or discomfort to be a drawback for this test?

A. It's certainly a possibility, but the issue is that the subjective symptoms that people have with swelling of the leg vary from person to person. Some people have these big legs that we talked about before, and yet they don't complain of much in the way of symptomatology. Others have less swelling and they have very severe symptoms.

Q. Normally a person who meets with you doesn't have an incentive to lie about the level of pain or discomfort they're in, isn't that right?

A. Normally?

Q. Normally someone, a patient who meets with you, would not have an incentive to lie about the pain or discomfort he or she is in, isn't that right?

A. I would hope that that's the case.

Q. They want to get the right treatment?

A. That's right. But I think the way the Villalta score gets around that is that you've combined the subjective with the objective. And in Mr. El-Hanafi's case, the objective that I had also was enough to make a diagnosis of PTS, post-thrombotic syndrome, that is severe.

Q. Let's talk about the objective then, Doctor. Do you have

Exhibit B1 in front of you?

A. D?

Q. That is the color diagram of the visual guide for the assessment.

A. No, I don't have it anymore. I did. Thank you.

Q. And here there are photographs of legs with descriptions that reflect whether the condition which I named -- swelling, redness, etc. -- is not existent, mild, moderate or severe?

A. That's correct.

MR. CRONAN: Your Honor, would you like an extra copy.

THE COURT: I have it. Thank you.

Q. Now, Exhibit B, do you have that? That is your assessment of the Villalta scale.

A. No, I don't think I have that anymore.

MR. CRONAN: May I, your Honor.

THE COURT: Yes.

A. Thank you.

Q. If I could direct you, Doctor, to page two.

A. Yes.

Q. And on page two, this is the report of your assessment of the six factors that you assessed, is that right?

A. Right.

Q. By the way, the last factor, pain during calf compression, that's another subjective factor, right?

A. Yes and no. You're eliciting pain by squeezing, and you

can see on the patient's face whether you are eliciting pain. So that's objective. And that's not the last -- the last factor is whether an ulcer is present, yes or no. So that's the second last one, yes.

Q. Oh, I see what you're saying, Doctor. But the pain, you're still relying on what the patient tells you --

A. No. You're squeezing, and you can look at the patient's face. And when I squeezed Mr. El-Hanafi's calf, he winced and drew his leg away. That, to me, is evidence of quite moderate discomfort with that maneuver.

THE COURT: Mr. Cronan, I have the point concerning what's subjective and what's objective.

MR. CRONAN: I'm moving on, your Honor, but to another question on the analysis done by the doctor.

Q. If we can look at edema on the top. And again, that is swelling, right, Doctor?

A. Yes.

Q. And you indicated that the edema --

A. Was moderate.

Q. Was moderate.

Now, on Exhibit B1, there's a picture of a moderate edema, along with the description, noticeable swelling and loss of bony landmarks, moderate pitting with pressure over ankle or shin. Do you see that?

A. I do.

Q. Handing you what is in evidence as Exhibit C3. What is Exhibit C3?
A. Right. So what you can't see on the picture, though, but when I pressed --
Q. I'm sorry, Doctor. My question is: What was Exhibit C3?
A. This is -- it doesn't have a number -- here it is on the back. C3 is a picture of his foot and lower part of the leg. What you --
Q. A picture you took yesterday?
A. A picture taken yesterday, yes. But what you can't see is that when you press on the skin and you made an indentation, and you could elicit that indentation all the way up the -- to the midpart of his shin. And we had a two-centimeter difference in the circumference of the calf. So that's edema.
Q. Do we see noticeable swelling in that photograph of the ankle?
A. It's difficult to see it, but there is some puffiness around his ankle.
Q. Do we see loss of bony landmarks?
A. There's some loss of the medial malleolus, below the medial malleolus.
Q. What time of day yesterday did you administer this test?
A. Sorry?
Q. What time of day yesterday did you administer this test?
A. I can't remember exactly what time I finally got in there,

but it was around 1:30 in the afternoon.
Q. Now, you directed that Mr. El-Hanafi should not wear support stockings earlier that day, didn't you?
A. I just said that I would like to see his symptoms at their worst, and so that would be easiest if they were off. I often tell patients that I see in my clinic not to wear their support stockings on the day that I examine them, because it's very difficult for them at times to get them on and off. And it takes time away from my examination. And I also like to see just how bad things are.
Q. The purpose of your evaluation was to figure out the condition that Mr. El-Hanafi was in, correct?
A. That's correct.
Q. Not the worst possible condition that he could be in.
A. Well, I think that --
THE COURT: I think this is --
A. -- seeing the reality of the condition is seeing what happens when you're not wearing the stockings, as well as what happens when you are wearing the stockings.
THE COURT: I think this is fairly obvious and getting argumentative.
MR. CRONAN: I apologize, your Honor. I think it goes to the subjective and objective results.
THE COURT: Which is the point that I've taken well.
MR. CRONAN: Your Honor, if I just may clarify, if he

was told not to wear support stockings and the doctor testifies support stockings alleviate pain discomfort and swelling, I think it goes directly to reliability of this test.

THE COURT: I don't disagree with anything that you're saying. I'm not sure it goes to the reliability, but it goes to how comfortable he is, how well he is with the stockings on as opposed to with them off.

BY MR. CRONAN:

Q. Your recommendation going forward is Mr. El-Hanafi should wear support stockings, is that right?

A. Absolutely, yes.

Q. And if he failed to wear support stockings yesterday, could that have caused a two-centimeter increase in the circumference of his calf?

A. Let's just be clear: He did wear his support stockings yesterday. He came with them on when I saw them, and he told me that he had been wearing them up until I had him take them off, when I started my examination and my questioning. So he was wearing his stockings yesterday when he first came in to the room.

Q. And, Doctor, lastly, just to be clear, the most recent ultrasound you observed for Mr. El-Hanafi did not reveal any free-flowing blood clots or any blood clots that appeared likely to break off at any point in the near future?

A. He does not -- that's right, he doesn't have any

free-floating blood clots in there. He has evidence of recanalized deep vein thrombosis with persistent abnormalities in the veins.

MR. CRONAN: Nothing else, your Honor.

THE COURT: Thank you.

MS. KUNSTLER: Your Honor, I have very few questions.

THE COURT: Very good.

REDIRECT EXAMINATION

BY MS. KUNSTLER:

Q. Dr. Weitz, do you still have Government Exhibit 1 in front of you?

A. I can't hear you.

Q. Do you still have Government Exhibit 1 in front of you?

A. 1?

Q. It's all right. The government has provided me with a copy.

A. I'm not sure what I've got.

Q. Here's a copy.

A. Okay, that one. Yes.

Q. Now, you can recall the government asked you a number of questions about that exhibit, correct?

A. Yes.

Q. And they asked you a number of questions about those symptoms, the symptoms listed on the first page of that exhibit and what those symptoms would lead you to suspect or consider.

My question is, really, if you have a patient with these symptoms as listed on page one of the government's exhibit, and you knew that patient had just been on a long flight, would that raise your clinical suspicion even further?

A. Yes. I think that, again, as we discussed earlier today, long-haul flights are a risk factor for deep vein thrombosis. And even first-year medical students know that. And if the patient gave me a history of being on a long flight and came in with symptoms that are pain in the back of the knee and in the calf, and they had the history of a long flight, it would make me think of deep vein thrombosis. And clearly the physician assistant here also thought of that, because he or she puts early DVT as the first item on the list.

Q. Now, what if that patient not only had -- if you knew that patient had been recently on a long flight, but what if you also knew that that patient had had a second prolonged period of immobility, as is the case here?

A. Well, the longer the period of immobility, the greater the risk of deep vein thrombosis. So your index of suspicion should increase.

Q. And when I refer to a second period of prolonged immobility, do you know what period I'm -- or what I'm referring to?

A. Yes, I do. Mr. El-Hanafi had a long flight from Dubai to -- I think it was to Virginia, and then he had another

episode where he was transported from Virginia to Oklahoma through both a plane and truck or some sort of vehicle ride and lots of waiting in between. And I believe at that second transport period he was fully shackled.

Q. Now, let's turn to the differential diagnosis on -- still on that same first page of Government Exhibit 1. The differential diagnosis -- you've repeated it enough. It's DVT versus Baker's cyst versus other popliteal problem, right? Now, what is done to confirm diagnosis of a Baker's cyst?

A. Well, if you want to confirm the diagnosis, typically you would do an ultrasound to show there is a Baker's cyst.

Q. And what is done to confirm a diagnosis of another popliteal problem?

A. Again, an ultrasound would help you evaluate what's going on in the area of the knee, the popliteal area.

Q. If you turn to page two of that exhibit, what are the two conditions -- what are the conditions that Dr. Watson is postulating in his differential diagnosis on the second page?

A. Well, Dr. --

Q. His or her, sorry. I don't know whether Dr. Watson is a male or female.

A. Dr. Watson is saying possible Baker's cyst or transient -- I think it's transient bursitis.

Q. What is done to confirm a diagnosis of transient bursitis?

A. Again, the Baker's cyst is a blister, if you will, on

the -- on that synovial fluid, which is the bursa there before the knee. So both Baker's cyst and bursitis could be diagnosed with ultrasound. Certainly the Baker's cyst could be.

Q. Now, from all of the medical records you've seen, does it appear that Mr. El-Hanafi received any further diagnosis or treatment for any of these possibilities?

A. No, not until July, when the ultrasound was ordered.

MS. KUNSTLER: Thank you. No further questions.

MR. CRONAN: Nothing, your Honor.

THE COURT: Thank you very much, Doctor. Please step down.

(Witness excused)

THE COURT: Would you like him to leave the exhibits at the witness stand?

MS. KUNSTLER: I believe some of them are mine, some of them are the government's.

THE COURT: Why don't I ask the doctor to bring them down to both of you.

Whenever you're ready.

MR. LOCKARD: The government calls Dr. James McKinsey.

THE COURT: Yes.

- - - - -

JAMES F. MCKINSEY,

called as a witness by the Government,

having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. LOCKARD:

Q. What is your profession, sir?

A. I'm a vascular surgeon.

Q. And where do you work, Dr. McKinsey?

A. I'm at Mount Sinai Hospital.

Q. What's your position there?

A. I'm vice chairman of surgery and the systems chief for complex aortic intervention for the entire Mount Sinai system.

Q. And if you can look at the black three-ring binder that's in front of you, we've assembled some exhibits there. If you can turn to Exhibit 34, which should be the last of those exhibits. We did not for convenience sake organize them in the right order, but they are just there in front of you.

Is that your CV?

A. It is.

MR. LOCKARD: The government offers Exhibit 34.

THE COURT: Any objection?

MS. KUNSTLER: No objection.

THE COURT: Government Exhibit 34 is received without objection.

(Government's Exhibit 34 received in evidence)

BY MR. LOCKARD:

Q. So your education and qualifications and current position obviously are reflected in this CV. So just very briefly, could you describe what your current practice is.

A. As a vascular surgeon I treat all forms of vascular disease with exception of that involving the heart. And the intracranial brain, both venous and arterial.

Q. Does that include the treatment of thrombosis?

A. Yes, it does.

Q. You said that you were the vice chairman of the department?

A. Department of surgery at Roosevelt, yes.

Q. Does that include supervisory responsibilities in that department?

A. Yes, it does.

Q. And have you also taught in the field of medicine?

A. Yes. I've taught at University of Chicago. Most recently I was at Columbia University for 12 years as the chief of vascular surgery there, and also the director of the vascular fellowship. So I had many educational responsibilities, as well as administrative responsibilities.

Q. And have you also published articles in your field of expertise as reflected in your CV?

A. Yes, I have.

Q. Now, you're in the surgical department. Do you have patients where you manage or diagnose deep vein thrombosis?

A. Yes, I do.
Q. And are those typically surgical or nonsurgical patients?
A. Most of them are actually nonsurgical. Some of them we will intervene upon, either as a way of treating a relatively acute DVT. Rarely I have to operate on chronic DVTs with significant symptoms. And then also for replacing filter devices and things like that in respect to a DVT.
Q. And you've been retained as a medical expert in this case, correct?
A. Yes, I have.
Q. And that's by the United States?
A. That's by the United States.
Q. And what is your rate at which you're compensated for this?
A. $400 an hour.
Q. And approximately how much have you billed or been paid so far?
A. I believe it's around $12,000.
Q. And you also have a separate fee for your appearance in court today?
A. Yes, I do.
Q. What is that fee?
A. That's $4,000 a day.
Q. Have you previously served as an expert witness in other cases?
A. Yes, I have.

Q. Have those been civil or criminal cases?
A. Civil.
Q. And if you can now turn to Exhibits 31, 32 and 33 in that binder.
A. I'm at Exhibit 31.
Q. If you could just look briefly at each one so that you are familiar with what it is.

Are those reports that you've prepared in connection with your expert services in this case?
A. Yes, they are.
Q. So let's look first at Exhibit 33.

MR. LOCKARD: At this time the government offers Government Exhibit 31, 32 and 33.

THE COURT: Any objection?

MS. HEINEGG: No objection.

THE COURT: Government Exhibits 31, 32 and 33 are received without objection.

(Government's Exhibits 31, 32 and 33 received in evidence)

MR. LOCKARD: So for identification and the record, Government Exhibit 33 is a letter dated December 19, 2014, from Dr. McKinsey.

BY MR. LOCKARD:
Q. Dr. McKinsey, what does your December 19, 2014, report generally relate to?

A. It was per the request that I actually evaluate Mr. El-Hanafi. I performed a physical exam and an ultrasonic evaluation. And my findings are carried out in this -- covered in this report.

Q. Now, in connection with that exam did you -- I believe you said you also performed an ultrasound?

A. I did, in conjunction with my radiology technologist.

Q. If you could look at Government Exhibit 11, that should also be in that binder. And, in fact, there's a loose copy on the shelf in front of you.

A. I have it.

Q. Does Exhibit 11 include pages from the ultrasonic evaluation of Mr. El-Hanafi on that day?

A. Yes. We actually printed out every image to make sure we had the full picture.

Q. And if you could look at Exhibits 22 through 28 that are also in that binder.

A. It starts here at 21.

Q. Thank you for that correction, Exhibits 21 through 28.

Are those photographs that were taken of Mr. El-Hanafi's lower extremities during your exam?

A. Yes, it was.

MR. LOCKARD: The government also offers Exhibits 11 and 22 through 28.

THE COURT: Not 21?

MR. LOCKARD: 21 through 28, thank you, your Honor.

THE COURT: Any objection? Do you wish to object?

MS. HEINEGG: No objection, your Honor.

THE COURT: Government Exhibits 11 and 21 through 28 are received without objection.

(Government's Exhibits 11 and 21 through 28 received in evidence)

BY MR. LOCKARD:

Q. Dr. McKinsey, can you please just walk us through the evaluation that you performed of Mr. El-Hanafi on that date, plus steps you took, and we'll clarify those things as you go along.

A. Originally he came to the office. First he was seen by my PA, as I was unfortunately detained in the operating room. And she did her initial evaluation. We started an ultrasound evaluation. I was able to then come back up to the office and then completed the evaluation, physical examination, mainly looking at his umbilicus, belly button down to his foot. We did listen to his lungs and this type of thing. And then after doing the exam, especially looking for the changes in his leg, with both supine and then dependent, meaning lying down and then hanging down. And then we reperformed the ultrasound evaluation so I could see the images in realtime as they were being obtained.

Q. Now, in connection with your physical exam did you also

take a history of Mr. El-Hanafi?
A. I briefly discussed where he was, what had been going on. I summarized the history I'd gotten from reviewing his records already. Had some discussion with him regarding how he was doing, what was going on. He stated that, you know, he didn't have a period of time where he had not been wearing his stockings. And since he'd been wearing his stockings, he said he was able to be more active and able to do more. And he was doing well while he was wearing his stockings.
THE COURT: Doctor, I'll ask you to slow down a bit for the court reporter.
THE WITNESS: I'm sorry.
A. So after that, and then asking any issue of family history of DVT, etc., I then proceeded to examine the patient.
Q. And in your conversation with Mr. El-Hanafi about how he was doing with the stockings, did he report to you any limitations on his activities or daily activities that he was suffering at that time?
A. No. Actually, his comment was he was doing well, as long as he was wearing the stockings.
Q. Did Mr. El-Hanafi report to you his subjective experience of pain that he was suffering?
A. He originally reported he had pain mainly in the area of the ankle and then radiating up. And he pointed to his calf, but then he also pointed to an area at the right lateral aspect

of his knee, pointed to a vein that was probably about two centimeters, three centimeters in length of some dilatation of his vein. Then he described that the pain would go up the inside of his leg, and he took his hand and ran it from the ankle up along the inside of his leg to his knee and up to the thigh, saying this was the distribution of his pain that he had been having.

Q. Did he talk about any other particular pain; for example, nighttime pain?

A. He did comment that he was also getting pain at night, especially when he would bend his knee while lying down.

Q. Now, before we move on to the rest of your exam --

THE COURT: Slow down just a bit.

Q. I'd like to break down those various reports of pain and talk about each of them, in particular the significance of that type of pain with respect to being typical symptom of DVT or of post-thrombotic syndrome or not being a classic symptom of a DVT or post-thrombotic syndrome.

A. Well, his symptoms were mainly that of pain around the area of the ankle, which really is very much not in what we see with a deep vein thrombosis. Certainly he -- the pain in an isolated vein really doesn't go with a DVT. We all have little areas of enlarged vein. But I did not see a feeding vein into that or a draining vein. So it was more an isolated segment.

The pain that he reported mainly when he took his hand

and went from the ankle up along the inside of his leg by his knee and up to the thigh was in the distribution of his superficial vein, but certainly not what you would see with someone with a deep vein thrombosis. Generally someone with a deep vein thrombosis, because of the obstruction of the vein, you'll see generalized swelling below that level of obstruction. And they complain of a circumferential pain, rather than a localized pain, on one side of the leg or the other.

(Continued on next page)

Q. And can you just explain what you mean, what is the difference between a localized pain and circumferential pain?

A. If I were to take a finger and point to one part of my body, that would be a focal area of pain, because you say it hurts right here.

But when someone has a deep vein thrombosis, the entire extremity swells, at least in some cases. And their pain is more of a global, generalized pain involving that entire area of the leg. So they say their leg is heavy. They feel fullness in their leg. But they generally do not point to one point and say it hurts right here.

Q. Why does deep vein thrombosis sometimes cause pain. What is happening that hurts?

A. Well, it really depends. There is two types of thrombosis. One is a superficial thrombosis in the vein outside of the fascial compartment of the muscles. So that is really in the fat tissue, right underneath the skin. That is veins we all see when -- and they are harvested for surgery. And you can get what we call a superficial thrombophlebitis, which means that there is a clot that forms in the greater saphenous vein, most commonly. That will lead to a significant amount of tenderness, warmth, and inflammatory responses ongoing. And that is sort of an example of how the body will respond to a clot.

If you develop a deep vein thrombosis, what will happen is a clot will form, and in many cases, patients don't know it. They are totally asymptomatic. Because pathways around that area of clot, or past that area of clot because it is not completely blocking, are adequate and venous return to the heart is fine. In those cases where they either don't have adequate collateralization, meaning alternate pathways, or there is a significant obstruction, then the blood below that level of the clot will actually become -- the veins become engorged. With that engorgement, there are stretch receptors within the veins, as well as going down into the musculature in the compartment, all that can cause pain. The inflammatory response of the vein that interacts with a clot can cause pain. And, also, what can happen, is that as you have that obstruction, the musculature in the veins within that become engorged and embodied. The problem with that is that, and this is why you can see more of a systemic response, or a generalized response, is that the muscular compartments are all contained within the fascial components. So that in the lower leg, you actually have four fascial components.

The fascia of the compartments are actually very rigid and don't really expand. It's like a leather. So if the muscle becomes engorged and swollen, and veins become congested, within that deep compartment, then they could have pain as that muscle starts expanding. And worse case, it can

expand to the point that you actually can have nerve injury and start having numbness and tingling of the foot. So it's a congestion that leads to swelling, as well as inflammatory response in the area of the clot.

Q. And when there is swelling from a deep vein thrombosis, I think you said that comes from when there is an occlusion in the vein, and there are inadequate pathways around that occlusion; is that right?

A. To put it in lay terms, something we're all very familiar here in New York, is if for some reason there is an accident along one of the interstates, things back up behind it. And, generally, they'll back up until there is a place where we can get an off ramp to go and get around that area of blockage. And the same thing happens in the veins, as well as in the arteries. If there is an area that develops a clot, if there is not adequate areas for the veins, venous blood to go around that clot, then it becomes engorged. And you get what we call venous hypertension or high pressure within the venous system. That's because the arterial system is still pumping blood down to the foot, but it comes back in, it goes through the capillaries, then it is trying to go back to the heart, it's still being pushed by the blood coming in behind it. It's kind of like a block at an escalator, people keep piling up behind it, piling up behind it. So you get the vein becoming engorged, because you have the pressure from the blood coming

from the artery and no place for it to go.

So you can see if you have a significant clot without alternate pathways, that's when the extremity becomes congested.

Q. To pick up on your traffic jam analogy, if there is a wreck up on 125th Street, would you see the traffic jam down on Canal Street, or would you see it up where the wreck is?

A. You generally see it -- and we have all experienced this. If you have a wreck and you happen to be in front of that wreck, you actually have smooth sailing, because everything is backed up behind it. So, generally, you'll see the effect of that in an area that goes distal, in this case, or towards the foot.

Q. In other words, does the swelling ever skip where the actual obstruction is, and start somewhere further down the extremity?

A. Swelling will generally start below the level of the obstruction. It doesn't necessarily have a skip zone, but it will start at the level of obstruction, or the point where you don't have adequate collateralization to go around that area.

Q. Now, does Mr. El-Hanafi currently have an occlusive deep vein thrombosis, based on your exam?

A. He has a partially occlusive deep vein thrombosis.

Q. So the swelling he has right now, is that the result of a. DVT, or is that part of a post-thrombotic syndrome?

A. The answer is yes to both.

He does have a DVT that, with a DVT, it will affect the vein valves. The vein valves are like locks, as you take water from a lake of different altitudes. So when the pressure is greater below the vein valve, as if when you are standing, whatever, the blood will then go back towards the heart. When the pressure gets greater above the vein valve than below, then the valves close. So that's the natural way we do it. So when you are walking, and moving, and your calf contracts, it is literally like pushing toothpaste out of a toothpaste tube, will push blood back towards the heart, the vein valves close and the muscles relax, and that prevents the reflux going back. That's called a cap pump mechanism.

What we see with patients with DVT, is that those vein valves become nonfunctional. Even if you dissolve a clot, most of the time those vein valves still are nonfunctional. So now you have the blood, because it is not being actively pumped, actually going backwards down because of that increased pressure, and that leads to venous hypertension.

Q. Did you make an objective assessment of the amount of swelling in Mr. El-Hanafi's right leg, below the thigh?

A. Right. Again, to try to be objective about it, we came in, he was not wearing his stockings that day. He had been sitting. But when I came in, he was lying down, but he was in a sitting position when I came in to see him. I had him lay

down and actually I made measurements using the bottom aspect of the kneecap as a landmark, and measured down 20 and 30 centimeters but I actually measured circumferentially around the legs, on both sides.

Q. And what did you find?

A. Basically, there was no difference between the circumference of each leg compared to the other.

Q. And that's when he is in the laying down position?

A. He was supining, yes.

Q. Did you also examine Mr. El-Hanafi when his legs were hanging?

A. Yes.

Q. What did you observe?

A. He had some venous engorgement of both legs. You could see the veins becoming more engorged on both the left and the right in the superficial veins, as well as the small cosmetic telangiectasias, more on the right foot than the left. There was in fact a slight small area of hemosiderin deposition at the area of the ankle on the inside.

THE COURT: Spell that.

A. H-E-M-E-R-C-E-R-D-I-N. Actually it's hemo --

Q. Okay. And you talked, I think we heard a little bit about hemosiderin deposition from Dr. Weitz. Just remind us, is that the leakage of blood into the surrounding tissue and then the breakdown of the red blood cells?

A. It is a very localized area. We talked, you know, what happens, is there is a natural communication between the superficial veins and the deep veins of the leg. And there is generally four levels that we have of these perforators or communication between the veins.

What happens when someone has venous hypertension, the venous blood pools. And because gravity, the further down away from the heart it goes, when you are standing up, just like when you are going into a pool, the deeper you go, the greater the pressure. So the distal, or most far from the heart connection of perforators are called Cockett, C-O-C-K-E-T-T perforators. And what happens is, with increased pressure within the vein, blood flow actually reverses and overcomes the valves in those perforators, and then will pool from the deep system into the superficial system.

Again, these lowest perforators are at the level of the ankle. So we'll see changes when the blood leaks out from the vein because of this increased pressure, at the level of the median lateral ankle, medialis. And so those are some of the very focal areas you see, and something you see fairly early on.

THE COURT: Slower.

A. These are very well-defined areas that we see early on in patients that have the post-thrombotic syndrome, or venous hypertension in general. You don't have to have a clot to have

these changes. Lawyers, surgeons, teachers will also get these type of changes with prolonged periods of standing.

Q. I think it would be helpful to walk through your physical exam using the photographs. Before we do, I have just a couple of preliminary questions about the exam itself.

Did you use a Wells scale in you're evaluation?

A. No, I did not.

Q. Are you familiar with what a Wells scale is?

A. Yes, I am.

Q. And why didn't you use a Wells scale?

A. Generally, if you are trying to say is a patient at increased risk of having a DVT. I had guilty knowledge, because this was what the whole evaluation was about. So I didn't see it necessary to test to see if he had a high probability of DVT when I knew, in fact, he had a history of DVT.

Q. Did you use a Villalta scale?

A. No. Mine was more a direct evaluation. Because my concern with the Villalta scale is, as was pointed out in depth is it is a very subjective, rather than objective tool. It can be used in research in trying to help quantify large groups of patients, but it really does not help me on a day-to-day basis of how I'm going to manage patients differently.

Q. Does the outcome of a Villalta scale -- does the outcome or a patient's score on Villalta scale, is that something that

would, in your general practice, affect your treatment recommendations one way or another?

A. Well, unfortunately, and was alluded to earlier, I wish we had better therapy. But regardless, if they come in and they are a 5 or a 24, the treatment is the same. And that is generally support stockings and leg elevation, if they had periods of swelling. And, generally, at night, telling them to elevate the legs on a pillow or two.

THE COURT: I know I am becoming repetitive, but it's very important for you to slow down so that we'll have a full record here. Both of you should slow down.

MR. LOCKARD: Yes, your Honor.

Q. So let's now take a look at the photographs from your examination. If you could turn to government exhibit 21.

A. Yes, sir.

Q. This is a picture of his left lower extremity in the dependent position. Obviously, you see the floor right below his foot. You can see an engorged vein, which is the greater saphenous vein going on to the foot. And you see small telangiectasias or small cosmetic veins that are enlarged there, as well as even a vein going on the top part of his foot, about half way between his ankle and his toes.

You also note a kind of reddish-blue discoloration of his toes, and some brownish discoloration at the level of the toes, and even going on to the foot itself.

Q. Doctor, you may have the only color copy of that --

THE COURT: That's all right, I can look over his shoulder, it's okay.

Q. The left foot was not an extremity that suffered a DVT?

A. That's correct.

Q. What do you see, again, on exhibit 22.

A. Twenty-two is just the outside or the lateral aspect of his left foot. And, again, you see some mildly engorged veins, as well as brownish discoloration and some reddish-blue discoloration of his toes. And, again, coming down towards the ankle area, a little bit of discoloration there also.

THE COURT: Do you have any idea of what caused that discoloration?

THE WITNESS: This is him. I means, you know, we all have anything from being exposed to fungus, to just your normal distribution of color pigments in your skin. Certainly, I saw no evidence that he had venous hypertension on the left leg. But what we are seeing is some of the changes that we all put a lot of stock in, even on his good leg. So the discoloration, the engorged veins, the more enlarged small capillary veins. So this just may be the way he is.

You know, obviously, we all know people that have varicose veins. And they don't necessarily have had a DVT. But prolonged periods of standing, genetics, whatever, can lead patients to develop some increased pressure in their lower

extremities in their veins.
Q. And exhibit 23, is that a photograph, again, of the left foot in the laying-down position?
A. That's in the supine position, so you'll notice, now, with the leg elevated, you will see some drainage, but still persistent veins on the top part of his foot. And that bluish-red discoloration has somewhat decreased, if not completely gone away. And you'll still see some of that color change around the level of his ankle.
Q. Now, let's look at exhibit 24. On exhibit 24, are we still on the left?
A. Yes.
Q. And what do you see -- what do you see of relevance in the photograph?
A. Well, again, now, this is with the leg elevated. So it is not having the effect of gravity as much. But we're still seeing these high or darkly-colored what we call hyperpigmented veins, somewhat small, on his left foot. And even going up onto the level of his ankle. So if you look at the Villalta score, this would actually be a moderate to severe, most likely, classification for his veins, just based on this. And that's his good leg.
Q. Look at exhibit 25.
A. This is his right leg on the outside or lateral view. And we're again seeing similar patterns where we see the engorged

veins going down onto the top of his foot. The pigment patterns we saw that were not dissimilar from the left foot. And you can see some areas where you see those cosmetic veins that are a little bit more darkly colored or hyper pigmented.

You also see the reddish-blue discoloration of his toes. Again, this is something more likely normal for him.

Q. And then maybe we can just go a little bit more quickly through 26, 27, and 28.

A. Well, 26 is the inside of the same leg, the right leg, in the dependent position. You see a mild engorged vein, very similar to what we saw on the left leg. And perhaps a little bit more of the small cosmetic telangiectasia or enlarged veins on the inside of his foot, and heel.

We then look, as we elevate the leg, you see that bluish discoloration disappear. Again, because gravity is no longer helping pool some of the blood in his foot. And you see the smaller veins that we mentioned. And you see that the greater saphenous vein now is starting to collapse some, and is not markedly engorged.

And then, finally, on exhibit 28, it is the outside or lateral view of the foot again, but up in the supine position. And the findings are pretty much as we have described before; decreased redness and blueness, decreased pooling of the veins, and the same kind of splotchy type of pigmentation going on on the top of his foot, down onto his toes, not hemosiderin

deposition.

THE COURT: You said not, what?

THE WITNESS: Not hemosiderin. It's not the breakdown products of red blood cells pooling after they have leaked out of the vein. This is something else that he has.

Q. Now, let's look at the ultrasound.

THE COURT: Exhibit?

Q. Which is exhibit 11.

A. I have the loose copy.

Q. Now, what were your basic conclusions, based on your review of the ultrasound?

A. This is where I really wanted to evaluate using duplex ultrasonography to evaluate the presence or absence of a DVT or clot within the vein, as well as the flow patterns one can see in relationship to position bearing down what we call a valsalva to see how much reversal of flow are going the wrong way in the vein could actually occur. And we did mainly obviously concentrating on the right lower extremity.

Q. And what portion of the right lower extremity, or right leg, what portion of the leg did you examine with the ultrasound.

A. Basically, we went from the iliac arteries -- now, this was done again by my tech, with my observations went over it. The iliac arteries are the ones that are going into the pelvis that drain the legs, going back to the big vein in the center called

the vena cava. And we assessed those. And we went, from there, all of the way down, looking at both the deep veins as well as the superficial femoral vein, or greater saphenous vein, and going down.

Q. How far down did you go?

A. We went down until it was mid calf, going onto the foot.

Q. And what did you find?

A. Basically, what we found was, on the right, the common femoral vein, which is the one -- or the iliac vein in the abdomen was patent without any evidence of obstruction. The common femoral vein --

Q. If I could interrupt. When you say it is "patent," what does that mean in lay terms?

A. That means there is no obstruction within, so it is wide open. Venous blood is travelling through it without any clot, any external compression. It is normal.

Q. Okay.

A. We then go to the groin. And we look at the common femoral vein. And it is widely open, patent, without evidence of obstruction. And it compresses very easily with simple pressure. And that's one of the tests we use. When we are looking to see is there something filling the lumen of the vein, that may be very early where it won't show up on ultrasound, what we'll actually do is take the probe and push and see can that vein wall collapse or not. If there is only

blood in it, without clot, then it will collapse right down and almost wink at you type of a picture.

If there is clot in the vein, even -- and very early clot, you really don't see as well with ultrasound, just because it doesn't have the echo shadows that can occur for ultrasonic waves to bounce off of. You will actually see where it won't collapse down, it will actually move with compression. So we saw that the veins in the groin and the common femoral vein were open without evidence of any blockage within them.

The most other -- one of the things we look at very carefully is the profunda femoral vein. That vein actually drains the thigh. And so it's one of the alternate pathways for collateral branches that we talked about before. Interestingly, as a surgeon, I can actually go in and remove the superficial femoral vein, or what we now call the femoral vein, and use it as a bypass for a larger organ or whatever I need to reconstitute. And patients generally have very little symptoms, as long as the profunda femoral vein is open.

So that is one of the dominant things we use to determine, do they have an adequate pathway for collateral vessels to the drain and the like.

And his profunda vein was wide open.

THE COURT: Remember to slow down.

BY MR. LOCKARD:

Q. I'll back up to where we started this discussion. Maybe if

I can spell iliac.

A. I-L-I-A-C.

Q. Femoral.

A. F-E-M-O-R-A-L.

Q. Profunda.

A. P-R-O-F-U-N-D-A. I'm not going to spell superficial.

Q. I think that's -- I think that catches us up.

A. So the profunda femoral vein is widely patent, open. P-A-T-E-N-T -- open.

And then, as we look further down, I start seeing an area that shows both the artery in the vein and there's good flow going in the appropriate directions. But, then, when you get into the area in the upper-more part of the thigh, away from the groin, probably about 4 or 6 inches below the groin crease, we start seeing some thickening of the vein wall. And this is what we would call a chronic, or the chronic changes of a vein due to a previous DVT. And so, here, I'm seeing that -- and this is really showing that the vein still has flow going through it, but the wall has thickened, because most likely from a previous blood clot being in that area. And that is in the proximal, probably 4 to 6 inches from the groin.

We follow that down, going towards the knee. And we see that pattern persists, and that there is still flow going through the femoral vein, but there is that thickening throughout the vein wall itself. This is very well organized.

I see it very nicely. You can see the echo shadows now coming through it. That gives me an indication that this is an older area of clot.

Q. And is the vein that you are talking about now, is that the vein where, based on your review of prior ultrasounds, is that the vein where his DVT was?

A. Well his DVT was in the femoral vein. And then, also, in the earlier studies in the popliteal, and even going into just below the knee in the proximal tibial veins. But we're now looking up in the more mid thigh area. So that it is worse than it has been described before, but as we proceed down, there were some changes I saw that were different than previous studies I reviewed.

Q. And approximately how much blood flow is getting through that vein during your ultrasound?

A. What we did was, this was actually taking the ultrasonic probe and looking along the length of the vein. We then turned the ultrasonic probe 90 degrees, so now we are looking just as if you took a cut through a loaf of bread. You can now see it on end. And we saw about 50 percent of the lumen was still open. And the other 50 percent had these chronic changes of previous deep vein thrombosis.

Q. You are very careful about calling it chronic changes associated with a prior DVT. Why do you call it that, instead of calling it a chronic DVT?

A. Chronic DVT is really a term we're not using as much anymore. I think, basically, it is now it is really showing that the vein has changed and, actually, the clot has become integral into the vein itself, so it's not going to move, it is not going to break free. It is actually well incorporated into the anatomy of the vein.

Again, as a surgeon, I have had the advantage over most of my colleagues that are not surgeons, where I have actually been able to operate and see fresh clot, and then operate on veins that have had chronic clot, or even subacute, something within comes to mind, eight weeks beforehand had a DVT. And what you find is, when you open the vein or artery that has an acute clot, it looks, forgive the expression, like jelly. Or currant jelly, it is sometimes described. Where it is just kind of squishy. Again, grape jelly is very consistent, but easily movable, and you can just kind of squeeze it like a paste in your fingers.

As you get into maturation process, as the clot organizes, the particles within the clot, the fiber and everything starts cross-linking and becoming more organized. It then becomes more incorporated into the vein wall itself. And having operated on these, where if they had been there for a month, two months, what you many times will find is you can't cut them out of the vein. You have to remove the vein itself. And it becomes very adherent and organized. As it gets into

the very chronic phases, that is again where it becomes fibrotic, meaning that it is really not like a jelly at all, and very, very different in appearance than what we see with acute blood clot.

Q. Okay.

A. So moving along again, we see that as we get down to the area just above the knee, we see that the vein is now open again. And so where we had seen clot in some of the earlier ultrasound, I now see that there is flow that has returned back into that area, or recanalize, as we call it. And that goes down through the popliteal. And we really didn't see any clot in the tibial veins, as we went further down.

Q. Now, Dr. McKinsey, approximately how many patients have you managed with thrombosis or post-thrombotic syndrome?

A. I would say, conservatively, five, six hundred.

Q. Okay. And in your experience, how severe are the symptoms of Mr. El-Hanafi's post-thrombotic syndrome at this time?

A. Mild, at best. I have seen patients that have come in that have had need for urgent operation because they were going to loose their leg if I didn't fix their blood clot. That's a very severe form, what we call phlegmasia cerulea dolens, or phlegmasa alba dolens. Then you can come into patients that come in with ulceration. And, as Dr. Weitz indicated, that is a severe form of the post-thrombotic syndrome. But you see that, it's fairly common. They come in with breakdown.

Because of that leakage of blood, and I should point out that it really becomes a fibrotic environment, because of the body's response to the chemicals that are released as the red blood cells are being broken down by white blood cells or macrophages. Then we end up with that creating or having an ulcer that forms.

Another significant portion of the population comes in with significant leg swelling. And I have had, just recently, I have had a patient --

THE COURT: I don't know how to slow you down, so after each sentence, pause.

THE WITNESS: Yes, ma'am.

I have had a patient -- just recently had one fly in because of the significant swelling, where his leg was double the size of his unaffected leg. The issue really becomes how to manage them, and how do they respond with it.

Acutely, we will generally make sure that we have an idea of the extent of the blood clot, and then work to compress the leg with support stockings to try and prevent that swelling that can occur. And, also, similar to a girdle, if you will, the compression stockings help prevent that pooling increased venous pressure in the leg from standing and exercise.

By having that girdle, if you will, or the support stocking, that allows our patients to get up, be more active, and do things without that significant swelling that can occur.

Q. Do you have any other recommendations for Mr. El-Hanafi's ongoing care and management?

A. I think, you know, certainly he has the underlying hypercoagulable state that was nicely outlined earlier today. That is something that is not related to his DVT. That is what has happened to him, either because of genetics, or because of, it could be nephritis. We have already heard that he has some reason renal issues. That could help cause the antiphospholipid-type syndrome.

Q. Pause on that phrase for a second. Antiphospholipid syndrome; a-n-t-i-p-h-o-s-p-h-o-l-i-p-i-d?

A. Uh-huh.

So, basically, as we are trying to, you know, this patient does have an underlying hypercoagulable state. The other issue is that he had a DVT. With that, he was treated with anticoagulation. And while on anticoagulation, he had another DVT. And in my mind, that is, especially in conjunction with the other information we just mentioned, for him to be on, most likely life-long anticoagulation, or at least until investigators were able to come out and find what is the best treatment for these patients that have the antiphospholipid syndrome.

So with adequate, appropriate anticoagulation, either orally or subcutaneously, and support stockings, and generally just to the level of the knee, he should be able to be active

and lead a normal life.

Q. If you had a patient that presented similarly to Mr. El-Hanafi, would you recommend any life-style restrictions to that patient?

A. Really, no. I mean I think what I generally will tell them is put the stocking on first thing in the morning, wear it all day long, take it off before they go to bed. And then sleep with their leg elevated on a pillow or two, just to help with the passage of drainage of blood through their leg, and see how they do. And with that, I don't restrict their activity. They are able to walk, run, do whatever they want to do and, generally, they do it quite well.

And he actually said that, with his stocking, he was doing well.

Q. Now, let's turn to away from the exam that you performed in your office a few weeks ago, and talk about deeper back into Mr. El-Hanafi's medical history.

Have you also reviewed other medical records, of his, in connection with your engagement in this case?

A. I was able to review the prison records as were made available to me, as well as the comments from Dr. Weitz.

Q. Have you also reviewed the records from outside hospitals that have also treated Mr. El-Hanafi?

A. Yes. As part of his time, he did have outside studies done in the hospital vascular laboratories. I was able to review

those notes and, also, able to review the actual ultrasounds that were obtained from either in the hospital or from the offices.

Q. I would like to try and read your overall impressions from that review before we attack specific records that are in there.

Overall, in your review of Mr. El-Hanafi's medical records, have you seen, in that history, reports of pain, and/or discoloration, and/or swelling in his right leg over the course of those records?

A. Throughout the course of the records, I saw several descriptions of pain, mainly in the area of the ankle. It seems like that has been his major issue of the focal pain comes from there, potentially involving the Achilles tendon, and then starting to radiate more up into the inside of his leg, and then going up to his thigh.

And it seems to be somewhat episodic which, again, it was a deep vein thrombosis. You would expect it to be constant, and it would not be focal pain in a joint, such as a knee or an ankle.

You generally would have people describing more pain in the nonjoint areas, calf and thigh, because that's the ones that are able to swell more, because you have the soft tissue, as well as the musculature in that area that is able to swell. Obviously tendons, bones, capsular spaces, as well.

Q. Based on your review of those reports, do you have an opinion of when the DVT in Mr. El-Hanafi's right thigh most likely formed?
A. Well, based on the ultrasound that we had available to us from September of 2011, there were changes within that, based on the ultrasonic images, that made me feel it was not fresh, but certainly one that was in that four-to-eight week period as it was starting to organize to become more the chronic changes that we see with chronic DVT. And with that -- we saw that. And then, interestingly, I saw those changes in September. And that was also reported by the independent review of the hospital. And then when I compared it to the later examinations going out into December, I saw that that clot had, in fact, changed. So that made me feel like it was not something that may have had an extended period there, and had stayed the same, but was in the normal progression that we see, day in and day out, as clots go from more acute or fresh to become more incorporated into the vein itself.
Q. Okay. And so that conclusion is based not only on your general experience with the progression of a DVT, but also on the changes that you saw in Mr. El-Hanafi's DVT in ultrasounds taken over time?
A. What I saw was, in the ultrasound back in September, that looked like it was, again, fairly within that eight-week period. It then became more chronic. And we actually saw

areas that may have recanalized that had initially clots that went away. There is a normal balance within the bloodstream between factors that try and make clot, and factors that try and break down clot. And that is the body's way to try and control this whole hemostasis or coagulation cascade.

We saw that some of the more clots around the level of the knee actually dissolved completely. We saw that the clot that was in the thigh actually was originally totally occlusive, then became partially occlusive. So something had happened.

Now I can't tell you that this is the -- I can say a six-month old clot versus a two-year old clot.

What I can tell you is when I see a clot that is in that first two-month window, with these changes, it is still fairly subacute. And then as it progresses in the time frame you would expect to become more chronic in appearance, that fits with the normal progression we see for clots.

So I would date, at least the clot that I saw as of the September 2011 ultrasound, to be somewhere within two months of that time period.

Q. Without being able to place precisely where in that two-month window it might have formed.

A. We don't have that availability. I can just say it is probably within that two-month's time frame.

Q. Why don't we look at government exhibits one through eight,

which should be in the binder in front of you.
A. I'm at exhibit 1.
Q. Okay. Which I believe has already been admitted into evidence at this hearing.
Is that one of the medical records you reviewed for this defendant -- I'm sorry, is that one of the medical records that you reviewed in connection with this case?
A. Yes, it was.
Q. Okay. Now, I just want to talk very briefly about a portion of the May 16th, 2010 report. Or notes, rather.
A. Okay.
Q. Which is about midway through that May 16th, 2010 note, where it appears that the person who performed this examination, or took these notes, is talking about possible causes of the pain that is being reported by the patient.
Do you see that?
A. Yes, I do.
Q. Okay. And is that something you have heard described today as a differential diagnosis?
A. We had extensive conversation regarding the early DVT versus Baker's cyst, versus other popliteal problems. One that was not mentioned before is that, in their examination, it was mainly stressed the pain was in the back of the knee. Again, an area not one would see with a DVT. And even went on to further explain that that comparison between the two calfs were

very similar, at least for temperature and -- they feel the same.

Q. Based on your review of this report, or these notes, at this time, looking at these notes, do these notes suggest to you that DVT is a likely cause of the symptoms being reported?

A. No, they say the patient had been exercising, doing push-ups. Pain is in an area of a joint. None of that would make me think of a DVT, especially without seeing any difference in size.

She commented the size of the calfs were -- basically feel the same, which would make me think that he really didn't have significant calf swelling at that time, but isolated knee pain.

Q. These notes were taken after the patient was on an international flight. And there was a little bit of discussion about Economy Class Syndrome. Just what's your experience with that phenomenon?

A. It is a great catch phrase you see on TV and everything else. But it really has not been shown to make a difference, i.e. if you are sitting in coach versus you are sitting in first class, the actual incidence of deep vein thrombosis is the same. I was actually attending a meeting where they presented on this. And there was no difference between economy class and business and first. It is just being on a long flight.

Q. Not necessarily being squished up against a window in economy?
A. No. We all kind of believe that, but it really hasn't borne out to be true.
Q. So there has also been some discussion of the defendant's transportation, within the United States, wearing leg shackles?
A. Correct.
Q. In your experience, would cuffs or another restriction that is too tight on an ankle, is that a factor relating to the appearance of the DVT?
A. No. I mean if you are constrained, even tightly constrained at the ankle, that may lead to foot swelling. Just like if you have a pair of exercise pants that draw together at the bottom of your foot, and they swell below it. It may lead to local pain at the level of the ankle or the Achilles tendon, depending on where it was shackled and what part of the -- unfortunately, or fortunately, I'm not an expert on shackles. But, you know, if there is a point where there is a point of irritation, that can lead to pain. But it is not going to lead to a blood clot, especially one that is above the level of any constraint from the shackles themselves. You would have to have something -- if it's constraining around like that, you would have swelling below, you are not going to have it above.
Q. We also talked a little bit earlier about Baker's cyst. Can you remind us, again, generally, what is a Baker's cyst and

what kind of effects or symptoms does it have?
A. Most of incidental findings, meaning that we did another study and, oh, look, there's a Baker's cyst. They can cause pain. Generally, the ones that are intervened upon. And it's basically an outpouching from the capsule of the knee joint going into the space behind the knee. They can be small, or become fairly large. They are, generally, I agree with Dr. Weitz, they are generally detected by ultrasound. But there is a difference. You have to order, at least in the United States, you order an ultrasound to rule out Baker's cyst, they are not going to do a venous ultrasound. They are just going to do the test that you asked them to do.
Q. In other words, if you order an ultrasound to rule out or diagnose a Baker's cyst, you wouldn't be able to use that ultrasound, you wouldn't see a DVT in that ultrasound.
A. The techs may not look. That's the difference, is that -- they are very much directed towards -- and, unfortunately, this is, again, life in the United States. They only get credit and, hence, the institution gets paid for, if you have an indication for the study. And so if you are saying knee pain, rule out Baker's cyst, they are going to look for a Baker's cyst. If they try and comment on the venous system and everything else, that is not part of the evaluation for Baker's cyst, and the diagnoses of rule out pathology, is no longer accepted.

THE COURT: Could you explain what that means, the last part?

THE WITNESS: Okay. In the current reimbursement model we have, if I come in, I would like to say rule out DVT or rule out -- we get sent to our lab, rule out vascular pathology. In other words, cast a net and see what you catch.

Right now, for a laboratory to be paid for by the government, a study, you actually have to have an indication, not rule out. So evaluation of leg swelling. Evaluation for Baker's cyst. Then you can do an ultrasound for it and the hospital will actually get reimbursed.

So we now get notes from our radiologists saying you need to give us a more detailed reason why we're doing it, rather than rule out.

THE COURT: Okay, thank you.

Q. The process of elimination isn't good enough, in other words.

A. I think there is a role for screening. Unfortunately, it is just not reimbursed.

Q. So let's look, now, at government exhibit 2, which for the record is a report relating to an encounter on May 25, 2010 for Mr. El-Hanafi.

A. Okay.

Q. Have you reviewed that report?

A. Yes, I did.

Q. And what about the symptoms that are reported in this report, how do those, in your mind, indicate DVT, not indicate DVT?

A. Their comment is mainly related to pain in the joint, as we go through this. And it does not really comment, per se, on a history of leg swelling, or significant venous engorgement, or enlargement, anything along that line. So their main point is, again, looking for an indication or pain in the joint itself. And they are treating it appropriately, if they felt it was pain in the joint, with a nonsteroidal antiinflammatory ibuprofen. They also felt he had a history of sprain or strain in the neck, which has resolved.

Are there other specific points you want me to comment on -- I'm sorry.

Q. Certainly. If you look at government exhibit 3. And, again, this is, for the record, the July 16th, 2010 encounter date with Mr. El-Hanafi.

Is this another one of the records that you reviewed in connection with this matter?

A. Yes, it is. Basically, they are saying he appeared somewhat anxious. But, then, as they come through the examination --

Just -- I want to make sure.

-- they basically say that he has swelling under musculoskeletal, but no other real comment, except for

swelling. Don't give a location for it.

Generally, when you think of musculoskeletal, you think of joint issues, not muscles, per se. And, then, when you come down on the actual physical exam, they note: No evidence of lower extremity edema on the right, and no evidence of low extremity edema on the left.

So again, they are not seeing any swelling of either lower extremity on their assessment there. And they also note full range of motion for both the left and right leg.

Q. What about varicosities or calf tenderness?

A. Calf tenderness. So they note, on their physical exam, this is their findings, that they have no tenderness in his calf.

Q. And what about with respect to varicosities in the lower extremities?

A. They note no varicosities consistent with increased pressure in the veins.

Q. In other words, DVT can cause varicosities, and they didn't see any in this exam, right?

A. Certainly deep vein thrombosis may cause varicosities. It doesn't necessarily do, but its absence doesn't support the diagnose of a DVT.

Q. Let's look, now, to what's been marked as government exhibit 4. Is this another one of the records that you reviewed?

A. Yes. This is from 3/11/2011. And subjectively, meaning what he was complaining of, he was complaining of pain and swelling starting from the ankle again, going up into the calf and now up into the back of the knee and into the right thigh. He does say this started about 10 months ago. And relates it to the cuff of the ankle again, potentially local trauma in that area.

As we move through, they note that he has swelling of the right ankle on page two of three. And they do note some tenderness in the calf area and popliteal area. And some increased veins on the foot. But he has full range of motion. Their feeling is that he has knee pain in the lower leg, and, again, treat him with nonsteroidals.

Q. In your view, which of these, if any, symptoms are consistent with DVT diagnosis or not indicative of DVT?

A. Well, again, it is pain starting from a joint, an ankle. And that's not where you are going to see the swelling and increased venous pressure that really leads to the post-thrombotic syndrome. So it is unlikely that pain from DVT is going to start at the ankle.

THE COURT: One part of your testimony has been confusing me. In the records where they read: "Pain in joint, lower leg," you leave out lower leg. Is that significant?

THE WITNESS: No. I was assuming they meant that was which joint, identifying a location of the body. But it

certainly adds nothing, or excludes anything by saying lower leg.

Q. So, for example, if the indication for: "Pain in joint, lower leg," referred back to, under musculoskeletal, where it says: "Swelling noted on right ankle, tenderness in the calf area and popliteal area," does that affect you're evaluation of these symptoms?

A. I think, again, we are trying to evaluate over a period of time. And as I mentioned before, DVT symptoms, generally, are not episodic, where they come and go. They should be constant. So where we are seeing more musculoskeletal pain where you have irritation in the joint space and things like that, that can be more episodic.

Judge, your point, also, when I was interpreting it, it was my interpretation was that if I was thinking pain in joint and lower leg, I would have made that distinction versus pain and joint, comma, lower leg. I was interpreting that meaning a defining region, rather than duality.

Q. Identifying the joint --

THE COURT: I guess I think of the lower leg as encompassing more than a joint.

THE WITNESS: I agree, where I was seeing that as saying rather than a joint somewhere else, they were saying a joint, comma, lower leg.

THE COURT: Located in the lower leg.

THE WITNESS: Right. What happens with these reports, having had to deal with electronic medical records, it I all by pull down. And so you have a section that says lower leg. Then you can say pain. So then it will print out: Pain, comma, lower leg. Or swelling, comma, lower leg. So you have areas that you work through as you are using electronic medical records that are kind of pre-scripted for you.

And so that's the way I see this written is the computer kind of filling in the blanks and, also, why you see we have so many pages, because these are all computer generated by pull-down, click, click, click.

(Continued on next page)

THE WITNESS: Before you there is also now mandated by the government, who do this type of thing, so it's not something you need to be -- it's the penal system.

And if you look on page two of three on 3/11/2011, the way I was interpreting it, you see if they have foot and ankle areas, they put and in there, meaning they're seen as two areas they're discussing, rather than a region of the body that would have been under pull down.

THE COURT: One second. If you take a look at page two of three in this exhibit, in the middle of the page, it says, indication of, comma, knee, comma, pain in joint, comma, lower leg. Now, presumably those are not all precisely the same thing. They're different things separated by a comma. So your assumption that if a comma separates something, something else, it doesn't mean it's something in addition, I'm confused.

THE WITNESS: It's working -- and I haven't seen their electronic medical records, so I am making an assumption here. But generally what you'll do is you'll come through and it will say symptoms, and you have little bunch of bubbles, and you click knee, pain in joint, lower leg, and you can click, click, click.

THE COURT: So we don't know one way or the other?

THE WITNESS: Yes, ma'am. But generally, when I've seen it, there's an "and" if they're talking about two areas.

But I agree, it seems a little unusual. Say I don't know of anywhere a knee would be separate than the lower leg. But if you look at the next line down, it says right ankle, pains and swelling. So they make a distinction when they're talking about the two.

THE COURT: I see.

BY MR. LOCKARD:

Q. So besides the medication that was prescribed as a result of this, the cephalexin capsule, C-E-P-H-A-L-E-X-I-N, and the Naproxen tablet, what other medical action was recommended or prescribed from this visit?

A. They recommended a -- getting a plain X-ray, two views of the ankle. Specific reason for evaluation of ankle, pain and swelling.

Q. And does that request for an ankle X-ray as opposed to a knee or some other X-ray indicate to you that the focus of the complaint was on the ankle?

A. Certainly, when you order an ankle X-ray, you're only going to generally get the ankle area. So I'd assume that was the area of focus and concern, and also my interpretation of continuing to seeing comments regarding the ankle.

Q. And if you look at Exhibit 5, which is a report of an encounter dated March 30, 2011 -- so several weeks later -- what, if anything, did you see in this report as it relates to being indicative of DVT or not indicative of a DVT?

A. Well, two things is the chief complaint is orthopedic and rheumatologic. It's not DVT. So they're still working on the assumption that his symptoms are most likely driving them to an evaluation of a joint space or a bony issue.

They do -- pain is somewhat ill-defined as cramping, aching and dull, but is separated by upward slashes, very different than what we saw, which is commas. They do note that the Achilles tendon itself has no limitation of movement but is very tense. It's a very tense tendon. And calf has -- I assume this is musculoskeletal spasm. So they're, again, focusing on the ankle, the tendon attached to the -- to help stabilize the ankle. Then it's an insertion point, meaning when it hooks up to the muscle in the calf.

So this, again, goes to some concern that something is going on at the level of his ankle, his symptoms are being attributed to the ankle region and the surrounding areas, meaning the musculature coming up.

We then go to a point where they say there is ecchymosis -- I believe this is the visit -- muscle aches, stiffness, but not -- they don't notice swelling per se. At the bottom of the page, page one of two, under examination, which is where the medical provider is actually examining, and again, it's the ankle, foot and toes. Specifically commenting on that region of the body, saying that there is swelling in the area of the ankle, foot and toes, edema, swelling -- again,

redundancy, because we both -- we've ascertained that's the same. And ecchymosis, which, again, is bruising.

You will not generally get ecchymosis in the ankle, foot and toes from a DVT. If you've had some trauma, injury to the Achilles tendon, bruise, bump, that's what you're going to get your ecchymosis from. So the physical findings there, again, go along with -- they're concerned that something is really going on with his right ankle joint.

Q. Is a musculoskeletal spasm in the calf area, is that an indicator of DVT?

A. No. It really is not. Charlie horse may be one way we can describe it also in layman's terms. The pain is generally more of a constant stretch type of thing. It's not a spasmodic type of pain.

Q. In fact, if we can look at Government Exhibit 6, which is a sick call request dated June 29, 2011.

A. Yes.

Q. Is this one of the records that you reviewed in connection with this engagement?

A. Yes, we did. I had to review it when I initially received the records.

Q. Now, does this appear to be the patient's own description of the need for medical attention?

A. This is -- the first component of it is generally what the patient is complaining of. And then the subjective component,

where he'll come in and -- the patient will come in and say, This is why I'm here. And so what is the problem? And it says, pain and swelling of right -- pain and swelling and right foot, not calf. Can only walk on my toes due to extreme pain in the ankle area. Not calf, not knee, not thigh. Need to see doctor as soon as possible, ASAP. Painkillers and ice not working. Pain increased last night.

Q. And if you look down in the -- towards the bottom third of the page, is there a description, another description of where the pain was located?

A. Again, they had to ask, where's the pain? He describes it, right calf down again into the foot.

Q. Now --

A. Now, it's interesting that he says that he can walk on his toes.

Q. What does that say to you about --

A. Well, as we described earlier, if you've got an issue with a venous hypertension, a DVT, blood clot, that generally leads to engorgement and swelling in the facile compartments, the deep -- you have the four different compartments in the leg.

Q. And then in lay terms, where are those four compartments?

A. Well, you have two in the back, one in the -- on the front and one on the side.

Q. Where are they in relation to your calf muscle?

A. Well, the two in the back are the superficial and deep

posterior compartments, and then you'll have an anterior compartment, meaning the top, and a lateral compartment, meaning the side.

Q. In other words, am I hearing you correctly that the calf muscle -- the calf muscle is in some of those compartments that you described?

A. Well, all the muscles that work the ankle and the foot are in those compartments. You have opposing -- it's like a pulley system, where the muscles in the back will help, you know, bring the leg up, bend the knee and then work at the ankle level. The ones on the top help bring the foot up. The ones in the back bring the foot down. The reason for that teleologically, the reason for the compartments is to compartmentalize the function. So you have several muscles doing similar actions. You put them in the same space, and then you bind them together with an outer wrapping that's nonexpansile, that sort of focus the function of those muscles. Unfortunately, because of that outer covering, when the -- if you have backing up of venous blood, again, being pushed forward by the arterial system, goes through the capillaries and comes back in the veins and can't go anywhere, you have congestion. And those muscles become swollen and tender.

And so if you go up on your toes, as we all know, your calves tense. And so if the muscle is being engorged and becoming tender, the last thing you're going to want to do is

make the muscles tense and put more pressure on them. So, again, it goes to if he's going up on his toes and able to walk, then I'd be more concerned, is there something going on locally at the heel level, where he doesn't want to put pressure on that heel? Not my field of expertise to define ankle issues per se, but it certainly goes against a significant clot that's causing engorgement and swelling of the muscles as you're suddenly going to tense a muscle to walk.

Q. I believe if we turn to Government Exhibit 7, which will be the next one, which for clarity of the record is a report of an encounter on July 6, 2011.

Again, is this one of the records you reviewed in connection with this matter?

A. Yes, I did.

Q. And on July 6th, about a week after that June 29th sick call request, what is the complaint that's being relayed in the subjective portion of the report?

A. He again comes in, chief complaint of orthopedic and rheumatologic issues and complaints of pain. My right foot bottom hurts for the last two months, since two months ago. I have had no injury to cause that. This is from the tight cuffs. The ankle still hurts. He does note his right leg is swollen since I was arrested in Virginia due to the tight cuff. I was X-rayed two months ago here.

Q. Now, can you sort of break down what's being reported there

in terms of things that might be indicative of DVT and things that are not indicative of DVT?

A. Again, he's complaining of pain on the bottom of his foot. Generally you're not going to have that pain associated with a deep vein thrombosis. And that's more a local phenomena, pressure phenomena. Whether it was from the -- an injury to his ankle or Achilles tendon region, I don't know. Again, if the tight cuffs surround his ankle, that certainly could have irritated his ankle joint and the Achilles tendon region. But certainly it's not -- you can't say that a tight cuff around the ankle is going to lead to a DVT above it, since venous flow is going away from that area, rather than towards it.

Q. And if we look down to the exam portion under musculoskeletal, in the ankle, foot and toes area, what's the first observation of that exam?

A. First normal bony landmarks so he doesn't have significant swelling in the foot that would cause you not to be able to see his ankle morphology and the bones in his ankle and foot. He has normal range of motion, again, going against any type of inability to move his calf. They do, in the ankle, foot and toes region note swelling edema and tenderness. And this, again, is some of the problem with the electronic medical record. Then they also say it's decreased range of motion. I would assume that since they -- as the last thing they said trauma. This is a negative statement, but one would assume if

they mentioned the trauma, they would at least try and elucidate it further.

Q. And then --

A. They comment, normal exam, full range of motion, nontender on palpation. So, again, everything that goes along with something that is really not a significant finding, especially with exception of some ankle or foot pain.

Q. And now let's go to Government Exhibit 8, which to identify, for the record, is a report of a, quote/unquote, encounter on July 27, 2011.

Again, is this one of the records that you reviewed in connection with this matter?

A. Yes, it is.

Q. And what is your view of the symptoms that are being reported and being found on examination in this encounter as it relates to indicative or not indicative of DVT?

A. He's, again, seen with chief complaint of lower extremity pain. He attributes it to the tight ankle cuffs or foot cuffs as ascribed here. Been seen in sick call before. Nothing really that would give me further -- pain is in the forefoot and calf, but not able to discern if it's radiating from calf to forefoot or vice versa. Originally said the pain is five. It was ten before, when he walks for long periods of time. More of a self-reported type of history there. They noticed some mild -- on their physical examination, under

musculoskeletal, they noticed that there's some mild reddish-blue coloring in comparison to the left but no edema or -- there's mild tenderness in the aforementioned area. I'm assuming to the ankle. No calf tenderness is noted. No calf redness is noted. There's no warmth or edema and there's full range of motion. He was able to walk on his heels and toes without difficulty. As per our previous discussion, I have some concern on -- that would not -- that would make me feel less likely for him to have a DVT. There appears to be adequate palpable pulses down in his foot. And the rest of his exam is really unremarkable. He has no popliteal tenderness at this point in time. And he has normal strength and normal gait under examination.

Q. And what's your evaluation of whether this report indicates to you that DVT is a likely source of these or a less likely source of these symptoms?

A. This sounds like we -- we're going to check everything out, but I don't have a high clinical suspicion that this is actually the case.

THE COURT: We've gone for quite a while without a break. Maybe we should take a ten-minute break.

And let me ask counsel during the break to talk to one another and give me a feeling for whether we'll need to reserve time tomorrow morning. Thank you. So we'll be on a ten-minute break until a few minutes to 5:00.

(Recess)

THE COURT: When Mr. El-Hanafi comes in I'll be asking you for your estimates.

Counsel, can you give me your estimates of how much longer you think you'll be?

MR. LOCKARD: Your Honor, I estimate about 20 minutes.

THE COURT: And on cross?

MS. HEINEGG: Half an hour to 40 minutes.

THE COURT: All right. The court reporter is fine with one more hour. So without speaking too fast, we'll continue.

I'd like to preview what is one of my main questions for each doctor, and that is: What extent, if any, do you differ with one another as to, one, how much pain the defendant has been in to date, due to his physical state, without any attention to what caused it, just what he has experienced; and secondly, looking to the future, what you expect his pain to be, and what care do you think he needs?

MS. KUNSTLER: Your Honor, should we have Dr. Weitz come back on the stand to address that question?

THE COURT: If he'd like to. I think it might be helpful to elicit this right away from Dr. McKinsey, then you can see if Dr. Weitz disagrees.

Do you have my questions in mind, or do you want them one by one?

THE WITNESS: Probably better if I take them one by one so I can give you a full answer, answer your questions fully.

THE COURT: Do you have any way of estimating the degree of pain that Mr. El-Hanafi has experienced due to his medical problems in the past four years?

THE WITNESS: I think obviously pain is a very subjective type of situation. And we have many people that can have severe pain, and many people that feel they're having severe pain that haven't had a real opportunity to feel pain. So one of the things I always use is if you've had a kidney stone, if you've ever had labor, how does this pain compare to that? Unfortunately, we can't use that here.

THE COURT: Or root canals. Go ahead.

THE WITNESS: But I think from what you've seen in my interactions with him and the description here, his pain has mainly been described to the area of the ankle. I don't see a significant sign of change -- this is where Dr. Weitz and I will most likely disagree most strongly -- in the ramifications of his deep vein thrombosis, meaning that he has minimal swelling. He has minimal changes in his feet. He does not have pitting edema. I don't see significant varicoceles. And by his own statements, when he's compliant with his support stockings, this was not -- he wasn't noncompliant, but when he is able to wear his support stockings, he actually does fairly

well, by his comment to me.

So I think if he has -- he has limitations moving forward will be that he should wear the stockings from when he gets up in the morning until when he goes to bed at night, and then elevate his leg on a pillow or two at night without wearing his stockings. He needs to have his stockings changed whenever they're easy to get on. They are size specific, so you just don't say, I'll go up on the gradations. Many times you don't really need to go over 15 to 20 millimeters of pressure, but they have to fit.

And so the function of them, they are mildly elastic, but the main thing is they're compressive. And that kind of helps prevent the fluid from pooling in his leg. So if he's able to get them on a regular basis, have them well fitting, then that really will allow him to do his activities. So he is going to be restricted by the need to wear stockings to try and prevent any long-term sequelae from his clot.

Having been someone seeing a lot of these patients having to have major surgery, bypasses or skin grafts, I see him nowhere near needing anything in that regard. So in my examination, as well as descriptions, I would worry about a musculoskeletal issue of the ankle and the need for stockings.

I think the other issue is that of anticoagulation.

One other thing, just observing him through the course of today, he's been sitting here for hours and I haven't seen

him fidgeting, acting, wincing as if he's in pain. It's just a pure observational statement.

The anticoagulation, yes, I agree 100 percent with Dr. Weitz. He needs to be anticoagulated, and he needs to for life.

THE COURT: Now, how about the renal malfunction?

THE WITNESS: Totally unrelated to the DVT, with the exception that it may be -- and, again, I'm going to defer to Dr. Weitz -- is that if he does, in fact, have the antiphospholipid syndrome -- and I have to give credit, we have one of the world's experts on it so I'll defer to him on that -- but if he does have that, then that may be causing some of the renal function, or the renal dysfunction may have caused the antiphospholipid syndrome. Certainly nephritis, meaning irritations or itchiness from the kidney, autoimmune disease, Lupus, things like that can cause the antiphospholipid syndrome. Because of that, we all know that people with the antiphospholipid syndrome are much more likely -- I believe Dr. Weitz said 40 times, I don't disagree with that -- likely to form the DVT. And that not only can be a DVT, meaning venous issue, but it also can be an arterial issue. They can have renal failure. They could have dialysis. They can have stroke. They can have kidney failure. They can have death because of the antiphospholipid syndrome. Not something because of his incarceration or the DVT, but because of

something else going on that is autoimmune regulated more than likely.

He also had another factor, meaning that factor five Leiden heterozygous minimal impact, actually. If he was homozygous, I'd be much more concerned, but I think with the two factors that Dr. Weitz has brought forward, as well as the recurrent DVT, meaning while on anticoagulating, having another DVT, I would certainly say he is definitely hypercoagulable and should be anticoagulated until science gets smart enough to figure out what else we could do with him. But that's, unfortunately, the -- and that's why I had some problem with some of the other scales of measures.

What we see is all in the matter we -- no matter what permutation we go through, the final answer is the same: Anticoagulate him and put him in the support stocking. And that's really where I think he'll do very well with it. I've seen patients with much, much worse symptoms than he has that actually do well, once we get them in stockings and, if necessary, anticoagulation.

THE COURT: Is the renal incompetence, to the extent there is any -- I'm not sure whether that's going to progress or not. Do you have any idea whether it will?

THE WITNESS: Well, I think it's mild, at worst. And I haven't gone through -- and, again, that's something I would more go to a nephrologist, who I understand he's going to be

seeing. But it's certainly not related to anticoagulation. It's not related to the DVT. So --

THE COURT: But it could be related to the high blood pressure?

THE WITNESS: It depends. I mean, I think -- I hate to bring up another idea, but, you know, one thing we see in the extremes of age is that there happens to be -- and, again I'm a vascular surgeon so I'm going to go to my specialty. If there's a potential blockage in the kidney artery, it can lead to elevation, especially on that bottom number, the diastolic number. So I think an ultrasound may be warranted in the workup of this to make sure he doesn't have an issue that may be obstructing blood flow to the kidney, because the kidney is one of our major sensors for blood pressure, our blood pressure regulation.

It's also a very selfish organ, meaning that if the kidney senses a low blood pressure, because there's a blockage in the kidney artery going to it, it thinks the whole body is seeing a low blood pressure so it releases a chemical that actually raises blood pressure, especially in a young individual, that bottom number.

Is it a long shot? Yes. It's kind of like ordering an ultrasound because nothing else is out there, but it's certainly, as I start working up someone for hypertension, something I would consider, just to make sure I can rule it

out.

The other, you know, and probably more likely -- and this would go to Dr. Weitz. I'll defer to his comments on it -- is that, does he have some type of nephrotic syndrome that really is totally unrelated to anything else, except for his genetic makeup or exposure? Things, again, we don't know yet, but by having a nephrotic syndrome, that certainly can lead him to develop this, you know, antiphospholipid syndrome, which then makes him hypercoagulable.

So in some regards, you know, if we wouldn't have had this DVT, he potentially could have presented with a life-threatening, catastrophic event that we really couldn't have rescued him from. So I think he definitely needs to be anticoagulated, and until we have a better answer, keep him on anticoagulation, whether via pill or subcutaneous injection. That's up to the doctors that are taking care of him.

THE COURT: All right. And with respect to the pain he's likely to suffer in the future, you said that's largely subjective?

THE WITNESS: But I saw him walking around. I see his leg. By 25 years' experience, you know, patients that have this minor level of disease with appropriate treatment, with stockings, do very well. They can walk --

THE COURT: Do you mean they're not in pain?

THE WITNESS: With -- generally not, no.

THE COURT: Okay. Now, I don't mean to cut you off at all, but I think at this point it would be useful for me to let Ms. Kunstler confer with Dr. Weitz to see if he has a different view on these matters.

MS. KUNSTLER: Thank you.

THE COURT: And if he does, I'd hear him right now. We'd take him out of turn.

MR. LOCKARD: Yes, your Honor.

(Pause)

MS. KUNSTLER: Your Honor, I think we should allow Dr. Weitz a moment -- I think there are some areas of agreement but some areas of disagreement, and I think Dr. Weitz could probably get through it.

THE COURT: If he's ready to testify, I'll ask Dr. McKinsey to briefly step down. Thank you.

(Witness stood down)

THE COURT: And if you wish, you may sit with counsel so you can consider what questions they might wish to ask. You can leave everything there. Thank you.

Dr. Weitz, I remind you that you're still under oath. Thank you.

You may examine.

MS. KUNSTLER: Your Honor, I didn't know first examining or whether you were asking Dr. Weitz the same questions but the first question you posed your Honor is: Do

you have any way of estimating the degree of pain that Mr. El-Hanafi has experienced over the past four years?

JEFFREY WEITZ, resumed.

REDIRECT EXAMINATION

BY MS. KUNSTLER:

Q. You heard Dr. McKinsey's answer to that question, based on his analysis of the symptomology. How is your analysis of the pain over the past four years different?

A. Well, in the records that I examined going back to essentially after his flight from Dubai on April the 30th, 2010, to the time of diagnosis of the deep vein thrombosis, that's a period of approximately 17 months. And during that 17 months, Mr. El-Hanafi had repeated requests for medical attention related to symptoms in his right leg. It was always the right leg, and they included pain in the ankle, pain in the calf, swelling.

And repeatedly these symptoms were more or less ignored. He went through a variety of sort of symptomatic measures with aspirin, an antiinflammatory, ibuprofen, with leg stretches, with heat or compresses. Nothing worked. So for 17 months, he went undiagnosed with the cause of this persistent progressive leg pain.

Now we know that, based on the ultrasound that was finally performed after that seven-month period, that he definitely had deep vein thrombosis. I don't think there's any

question about that. We could argue about when it started. Clearly when it was ordered in July, not done until September, they must have been thinking about deep vein thrombosis, because they did an ultrasound looking at the veins. We heard already about payment schedules and how you have to identify what you want the ultrasound to look at. So he had deep vein thrombosis that went back at least until July, but his symptoms went back for months before that. So, again, I would venture to say that he's gone for months without diagnosis.

He now has DVT. We have heard all about the issues about his post-thrombotic syndrome and his antiphospholipid syndrome, his need for chronic anticoagulation, the hypertension and the impairment in renal function, all of which require more attention. I think he's suffered quite a bit from this condition.

Q. Thank you. And I believe with the questions about the renal system, you were -- you're in agreement with Dr. McKinsey?

A. I think all of these are possibilities that need to be explored, so I would hope that he has access to the nephrologist, the kidney doctor, in a reasonable length of time.

Q. And with respect to future pain, I don't know how it was at largely -- all you know is what Mr. El-Hanafi subjectively told you and your experience on the Villalta scale. Is there

anything beyond that deals with current pain, which is both subjective and objective assessments of pain on that test?

A. Right. Both on my subjective and objective test assessment using the Villalta score, he has severe post-thrombotic syndrome. Fortunately, I think, as Dr. McKinsey indicated, he's getting a pretty good response with the compression stockings. That's wonderful for now, that he does that. It helps.

But even with the stockings, he's still very limited in what he can do. He can't do the squats. He can't do any jogging. He's a young man, and he would like to be able to do these activities just to keep fit. And he's limited in what he can do to keep cardiovascular fitness up. Yes, he could do upper body strength exercise, but that doesn't help a lot for your general cardiovascular fitness.

MS. KUNSTLER: Is there anything else, your Honor? I was trying to cover your questions.

THE COURT: No. I think what I should do now is let each of you cross-examine one another's expert. So the government could go to cross on this very limited area, and then you could cross Dr. --

MS. KUNSTLER: I would suspend cross on --

THE COURT: Do you have any cross?

MR. CRONAN: I don't have any questions.

THE COURT: Okay. Please step down.

(Witness excused)

JAMES F. MCKINSEY, resumed.

DIRECT EXAMINATION (continued)

BY MR. LOCKARD:

Q. Dr. McKinsey, I would like to just clarify one thing that's at least not clear to me, and possibly not clear in the record either. When we talked about renal impairment, have you seen renal impairment in your review of Mr. El-Hanafi's records?

A. Nothing that really looked like it. It was something that drew my attention for a second, but, again, that was not my focus of the review. You can lose one full kidney and have a creatinine that's nearly norm at 1 to 1.2 creatinine, someone donates one or removed one for cancer.

Q. So is the elevated creatinine levels that Dr. Weitz testified about an indication they should be monitored as opposed to an actual impairment or failure of function at this point, or what's your view on that issue?

A. It definitely is a monitoring situation. I think it would be worthwhile to do renal duplex, just to make sure he doesn't have something like fibromuscular dysplasia, which is something that can occur in younger individuals. Again, vascular surgeon thinking of vascular issues. But I don't think there's anything that -- at most, it may be salt restriction, dietary restrictions for protein. These are things that are easily managed wherever he may be.

Q. I'd also like to ask another question about the support stockings. If an individual presents with pain and swelling from a musculoskeletal issue in addition to post-thrombotic syndrome, what, if any, effect would the compression stockings have on the musculoskeletal issue?

A. Actually, it should help improve it, depending on what the issue may be. Obviously it's not going to help a fracture, which we've had an X-ray that shows he does not have. But if there's a ligamentous issue or a tendon issue, compression has -- we see with our athletes and everything else, they come in, they wrap their legs and they feel better. So compression has many things to help blunt the inflammatory response and help prevent the swelling that can occur in joint spaces also.

Q. And then I'm going to move to the September 2011 ultrasound, which I think we've addressed, but I just want to make sure it's clear in the record.

Based on your review of the DVT in the September 2011 ultrasound, could that DVT that you saw in that ultrasound have occurred in April or May of 2010, 16 or 17 months prior?

A. That's very unlikely. Again, by the nature of the natural healing of a blood clot, you can say that if you saw it look more like a longer duration, you say, did I miss it, but when you see those changes that really kind of go along with a fresher clot, that then matures over the next two months to become more of a well established clot, well organized clot,

that tells me that that really was something that that specific clot that we were looking at had probably been there only for a couple months, at best.

Q. Given that Mr. El-Hanafi is an individual who has been discussed at length as a predisposition to clotting, could he have had other clots in the past that did not appear on the ultrasound?

A. Certainly. We've seen that. We've seen where he had clots in his popliteal vein that were well documented in the ultrasound, but yet the ultrasound that we did, I personally reviewed and was there as it was being done, did not show it. So because he is predisposed for making clot, we may see that he is making it and then breaking it down. And this is a repetitive cycle that many times would have gone undiagnosed. Again, as I said, people actually removed, myself included, the femoral vein for other reasons in patients are relatively asymptomatic. So by any of this blocking and slowly blocking, as long as it doesn't impinge on the profunda femoral vein, then many people do very well. And so I think this is something where he could have -- you know, this has been going on for some time. We don't know.

Q. In circumstances where you are able to identify a DVT in its early stages, what types of interventions are available?

A. Well, it really depends on the symptoms that are associated with it. If someone comes in that has mild swelling -- in my

practice someone who, with two centimeters of swelling at most, is someone I would classify as mild swelling. When I see them doubling the size of their leg, come in very tense, the skin looking like an overripe tomato, that's something I consider a severe occlusion in DVT.

With that, in the earlier phases, yes, I can go in and put a catheter in there and try and dissolve the clot with a blood clot dissolving medicine. The term has been used several times today, that Coumadin, Lovenox, Xarelto are blood thinners. That's actually wrong. They are -- they are anticoagulants. They don't change the viscosity of the blood at all. They don't thin it like a thin paint, but it actually just prevents a clot from forming. So if you come in and then you use a different agent, which we call a thrombolytic agent, it will actually activate the thrombolytic system to actually break down a clot that's already formed. Heparin, Coumadin, help prevent clot from forming, but it doesn't affect the existing clot that's there. The body may, just like water running over limestone and being activated by the natural fibrinolytic system will enhance that and come in and use an agent -- it's called TPA, tissue plasminogen activators. The most common -- I've used urokinase, which is a similar agent, but now mainly we use TPA. And if I have someone that comes in that has severe symptoms, especially if they've got more than iliac veins, which can help block off, and then by being in the

vein up in the abdomen, it is now preventing drainage from that important profunda femoral vein, that becomes more of an issue.

So early on I can go in and place a catheter and then give the -- a clot dissolving medicine that slowly allows the clot to dissolve, if it's within that first four-week time period pushing it up to eight weeks, but you have to use a lot more of the drug.

But that comes at a cost and a risk. And I don't mean a financial cost. If I have someone that has a clot in their thigh, I would need to see a significant amount of swelling to make me want to do that. It's an uncomfortable procedure. I actually have to bring them in, put them on their belly, access the vein behind the knee or lower and run a catheter up there, and they have to lay in that position as we give the blood clot dissolving medicine.

The real concern I have in using it if they're not severely symptomatic is there's risks to using blood clot dissolving medicine, or TPA. And that includes intracranial bleeds and GI bleeds. And I've actually had a patient have an intracranial bleed and actually die from the use of TPA. So it's something I take very seriously. I've never had someone have a GI bleed from Lovenox, unless they've had a previous history of multiple GI bleeds, and certainly not a bleed into their brain. But when you go into much more active clot dissolving medicine, you have to be very careful when you

decide to use it, and only use it in those patients where you think the risk of not using it is greater than the risk of using it. And so then you'd be more likely to go in to try and use it judiciously but to try and dissolve the clot.

Now, the real issue that goes with that -- I'm sure Dr. Weitz and I would agree -- is that even if you go in and dissolve the clot, you're still having risk of developed the post-thrombotic syndrome. So just because you made the clot go away doesn't mean that you're not going to develop the symptom, because those vein valves can be injured. And then if they allow the blood to go in the wrong direction, you still can end up with venous hypertension. It may be better. We're still trying to investigate that. But that's been an ongoing work for many decades, trying to figure out what's right to do for that. So more higher up into the abdomen, I'm more likely to do it, especially if their symptoms are severe. Going down into the thigh, I am less likely to do it, only if they have very severe symptoms.

And as I mentioned earlier, I have actually operated early on in the patients that had severe symptoms. And that was where I removed fresh clot and actually found it was someone who came in that had a previous older clot that was probably in the range of about six to eight weeks in duration and then had a new clot that formed on it and became profoundly symptomatic. I was able to remove the fresh clot fairly

easily, and just with a special catheter we pull through that moves the clot out. But when I actually, directly looking at the older clot that was there, it was really incorporated into the vein wall itself. And there's no way of getting it out without actually just removing the vein in that section.

Q. Is there any way to predict with any degree of reasonable certainty if anticoagulation had been started earlier, whether or how much it would have affected the degree to which the clot became occlusive or how severe the DVT itself was?

A. Well, I think we've seen the natural history of this in this limited -- forgive me for saying case study, because what we've seen is he originally presented with a clot, and it was totally occlusive. It then dissolved, and some of it broke up, and he had a partially occluded clot, thrombus. We then later found they had a new clot that was totally occluded that, again, opened up again, and right now it's open again.

So I think that, you know, we're seeing the natural ebb and flow of these type of things as we look at the coagulation cascade. And by having him on anticoagulation, I think we've got a baseline, but certainly it's still an active process. And that's why, again, I think he needs long-term anticoagulation in something that's reliable. Coumadin, I think, is one that we all have problems managing, just because it's -- can be affected by many things; liver function, what you ate the day before, this type of thing. So it becomes much

more of a challenging medication to manage. And we actually have to bring patients in sometimes once a week, once every other week, until we get them on a stable dose.

Using things such as Lovenox, Xarelto, which we've also mentioned, are things that we can now give that don't require continuing monitoring, and more importantly, are more consistent interaction. So I think there are opportunities we have to continue this. But if we would have started it before he ever got on the plane, would it have made a difference? I really don't think so.

I think his real problem -- and, again, this is an opinion, but his real problem, as was pointed out by Dr. Weitz, is this underlying hypercoagulable state of having a factor five Leiden heterozygous, but more importantly, having an antiphospholipid syndrome.

Q. I'd like to just briefly address standard care before we conclude. In your review of Mr. El-Hanafi's medical records, in your opinion, did it fall below acceptable standard of care not to have diagnosed the likelihood of a DVT prior to the review of the ultrasound results in September of 2011?

A. Can you state that one more time again for me? I'm sorry. Can we read it back?

Q. In your opinion is it below acceptable standards of medical care for his DVT not to have been diagnosed until the results of the September 2011 ultrasound?

A. Well, it's my opinion that the main DVT that was documented in September was really, at most, four to eight weeks in its presence, that acute totally occlusive thrombus, or subacute. So I think it's not that far out of the range of -- especially with the symptoms we saw. I mean, if he came in with a massively swollen leg, where you could see that you can't -- I mean, I see them when they come in: You can't see their knee, you can't see their ankle, their foot is as big as a pumpkin type of thing; figuratively, but there's no doubt that they've got something going on. He never really presented with those symptoms.

So I could certainly understand if you talk about standard of care, and that's kinds of how we, I guess, sort of define this. I don't see that there's a significant violation of the standard of care, based on the findings that he had. There is some, you know, should I do this, should I rule it out, but he certainly was not profoundly symptomatic, and he certainly did not appear to be at significant risk.

Now, can I say it's ideal that you don't get an ultrasound for several months? Obviously not. And I think if there was a very high clinical suspicion, and if you look at to note where they ordered it, they kind of went through everything else that was more musculoskeletal, and also as an afterthought they said, let's get an ultrasound. So in the flavor of their note, they really didn't have DVT high on their

list, because the symptoms weren't classic for DVT. So, would I like to have seen an ultrasound earlier? Yes. But interestingly, if my theory is right, based on the ultrasonic finding there, if he would have gotten an ultrasound two months before it, that may have actually preceded the formation of his clot and it may have been normal.

(Continued on next page)

Q. Based on your review of the medical records relating to Mr. El-Hanafi's care after the DVT was identified, in your opinion, does that care comply with acceptable medical standards?

A. I think it did. I mean I think they had some issues, obviously, of trying to balance his anticoagulation. We saw evidence where his protime went very high, and then came low. So he was obviously trying to get coordinated with that, at which point I think, in a very appropriate decision, the physicians there said this is just not working, we can't make sure that he is gonna get an appropriate level of anticoagulation, for whatever reason. Whether it is dietary intake, his metabolism, his liver, whatever. They said they can't do it. And that's when changed it to an alternative medication, which I think is a thoughtful and a right thing to do. He had certainly been seen. He has had the stockings. There was some question of whether the stockings were needed or not. And I think, at that point, he probably didn't have the stockings as readily available to him. We had that discussion earlier. Once he got back to having the stockings at a regular basis, by his voice and by my exam, he is doing very well with it. So I think that to say that there is a true deviation from the standard of care, I would say no. If he came in and had, frankly, 10, 15 centimeters swollen leg and they did nothing about it, I would be more concerned, which was not the case and never documented.

MR. LOCKARD: If I could have just one moment, your Honor.

THE COURT: Yes. And, as a matter of housekeeping, the government has not offered exhibits 2 through 8 yet.

MR. LOCKARD: That is correct, your Honor. And at this time, we offer exhibits 2 through 8.

THE COURT: Any objection?

MS.KUNSTLER: No objection, your Honor.

THE COURT: All right. Government exhibits 2 through 8 are received without objection.

(Government's Exhibits 2-8 received in evidence)

THE COURT: All right. Anything? Yes, go ahead.

MS.KUNSTLER: We may be pushing a little up against 6:00. It is somewhat later than we anticipated.

THE COURT: I know. I took time with my own questioning.

Go ahead.

CROSS-EXAMINATION

BY MS. HEINEGG:

Q. Good evening, Dr. McKinsey.

Your current position is the Vice Chairman at the Department of Vascular Surgery; is that right?

A. No. I'm the Vice Chairman at the Department of Surgery. And I'm the Systems Chief for Complex Aortic Interventions for the entire section of surgery throughout the Mt. Sinai system.

Q. And that's a new position?
A. Yes, ma'am.
Q. Doctor, have you participated in any clinical studies of deep vein thrombosis?
A. Specifically, no.
Q. Are you currently participating in any clinical studies of deep vein thrombosis?
A. No.
Q. Have you published any peer-reviewed articles on deep vein thrombosis?
A. Not specifically, no.
Q. Approximately how many patients do you see in a year?
A. I would say in the range of 500 to 600.
Q. And approximately how many of those patients are DVT patients?
A. I would say 10 to 15 percent.
Q. You said it was about 23 a year; is that right?
A. It would -- I would say I have seen between 500 and 600 patients with DVT, and sequelae thereof, in my career.
Q. Okay.
A. I tend to see -- excuse me. But I tend to see, also, the more complicated cases, as when I was the Chief of Vascular at Columbia. And then, here, I would be seeing the ones that came in with significant problems and issues, not the more mundane. I actually recruited --

Q. So it would be fair to say that, as a surgeon, you don't normally treat a DVT with surgery, unless it is a pretty serious one, or there is complications; is that fair to say?
A. Depends. If you define surgery as a scalpel, that's true. If you find intervention, which I also do, and that's a majority of my practice, that is much more common.
Q. So you tend to get these more severe cases?
A. Yes, ma'am.
Q. Typically, at what point in the correction of an illness do you see patients who have DVT?
A. We'll see them from initial presentation to long-term management. As vascular surgeons, we see patients and follow up, and I continue to follow them along.
Q. Are you, generally, a doctor who orders the first ultrasound?
A. Sometimes I am. Sometimes they come in with an ultrasound already.
Q. And just briefly, you mentioned that the economy class syndrome is something of a misnomer, that you are no more likely to get a DVT in economy than in first class. But meaning that the risk is the long-period immobility on the flight, right, not --
A. That's correct.
Q. But you would say that it's the long period of immobility, and not what class of -- not whether you are in economy or

first class that is the risk factor for developing a DVT?
A. Well, the connotation was that economy class you were more likely to be less mobile. You are also more likely not to stay as well hydrated, because you don't want to have to get up and crawl over the other two people next to you to go to the bathroom or walk up and down. So that was the bias. And many of us kind of grew up with that of saying, that was the economy class syndrome. But, again, it was many years ago now, but certainly that was presented that, if you come in, and whether you are flying coach, or whether you are flying business or first class, your incidences of DVT is greater, whether you have that much mobility or not. So there is a lot more factors that come into it.
Q. Again, flying is a risk factor.
A. Yes, ma'am.
Q. Is that because it is a prolonged period of relative immobility?
A. Well, as I just said, we were not able to -- you would think that would be the case, if you could say the person in the window seat in coach was the one always getting the DVT. But whether you are in business or first class, you still have a greater opportunity to walk around. And, certainly, you're much more mobile, and you still have increased incidence, so there is many things we don't know yet.
Q. When you provide care for a DVT patient, are there

particular guidelines that you follow?
A. In regards to anticoagulation and to management, and to -- I guess I need more specifics regarding your question.
Q. Well, are you familiar with the American College of Chest Physicians Guidelines for treating DVT?
A. Yes, ma'am.
Q. Would you agree that those guidelines are fairly authoritative?
A. No. They are opinions.
Q. Okay. Are they opinions that you agree with?
A. Some I do, and some I don't. The art of medicine is you have to be able to analyze each patient and figure out what is the best for them. And that's where experience comes in.
Q. Are there other guidelines that are different opinions that you prefer?
A. No. I mean I think each one of them, it is more the direct assessment of the patient. And someone coming in -- many of these guidelines try to make it protocol driven, or cookbook. And that's not what you can do. You can come in and see how severe their symptoms are, do I need to do lytic therapy or do I not need to do lytic therapy. These are all questions that you really have to individualize to the patient. They are meant as guidelines, they are not authoritative.
Q. In your practice, when you order an ultrasound for suspected DVT, how soon do you expect that ultrasound to take

place?
A. Well, I'm spoiled, I have the ultrasonic lab right there. So I will see it during the time of the visit, if possible, or if unless they already had one already.
Q. Well, so what's the outside time frame that would be acceptable. Would a day's wait be acceptable?
A. I think we can go into that. And I think that, certainly, you would like to get it in a timely fashion. And it depends on how significant a suspicion you have that they have a DVT.
Q. Okay. And, well, the ACCP guidelines addresses that to an extent in terms of what kind of treatment a person with a suspected DVT should get; isn't that right?
A. It does, when you truly have significant symptoms, yes.
Q. Well, there is a range, right. There is a range from mild to high, and with a different range of treatment for each set of suspected symptoms?
A. Right. What we were doing is that we would actually -- depending on, you know, since I ran the vascular lab for many years at Columbia, we would come in and say do we think the patient has significant symptoms. And we would actually go assess the patient and put our own judgment of how quickly we need to get an ultrasound based on the physical finding. I agree with the guidelines, if you have a high clinical suspicion.
Q. Also the guidelines say if you have a high clinical

suspicion or a person who is at high risk, that you should begin anticoagulation therapy if you can't get that ultrasound within four hours, right?

A. I agree with that. If you have a high clinical suspicion.

Q. And if there is a moderate risk person, that you should begin anticoagulation treatment if you can't get that ultrasound within 24 hours?

A. That's where judgment comes in. More, it depends on what day of the week it is, and what the symptoms are.

Q. That is what the guidelines say, right?

A. Again, in the guidelines; yes, ma'am.

Q. And the ACCP guidelines say that that person with a low risk, they should be treated with anticoagulation therapy if you can't get that ultrasound within 48 hours, right.

A. I can't quote the guidelines verbatim, whether it 48, 72, I can't quote. Again, I don't have to deal with that, because I have my own lab.

Q. So if you had a patient who you had evaluated as at risk for DVT, and you ordered an ultrasound, what is the outside time frame that you would consider acceptable?

A. Again, depends on my suspicion and everything else. I would say a week. Just giving a number.

Q. Okay. So outside of a week would be unacceptable, an unacceptable amount of time to wait. What if you had to wait a month?

A. Again, depends on the symptoms of the patient.
Q. Would a month be acceptable?
A. It all depends on the clinical symptoms.
Q. So there are situations in which it would be acceptable to wait a month to get an ultrasound after you had ordered the ultrasound for a person who you suspected had a DVT?
A. I think it would be desirable to get it in within that time frame, but I can't say what should or should not be done.

Again, someone presenting with ankle pain, and then the whole work-up is musculoskeletal, it is just as common as --

Q. Oh, we'll get to that in a minute.

You testified that you believe Mr. El-Hanafi first developed a DVT six to eight weeks before the ultrasound on September 30, correct?
A. I said that that DVT, which I saw, then, would be consistent with one that formed within six to eight weeks.
Q. So you based that date on your reading the of ultrasound that was taken on September 30, 2011?
A. Yes, ma'am.
Q. And it was based on your viewing of that, of the clot, because of the subacute nature of the clot?
A. Yes, ma'am.
Q. So it's your opinion that a DVT takes six to eight weeks to progress from acute to subacute?

A. It can. That's variable. And, again, I say this is not an exact science. But we can see changes that make it not the chronic changes you associate with DVT in the vein wall. So if I see something that has that characteristic, I can say it has probably occurred somewhere between the last four to eight weeks. Can I say it was two weeks versus six weeks? No, I cannot.

Q. So are you saying that a DVT progresses from acute to subacute at the same rate in every single person?

A. Of course not.

Q. So there are people for whom their DVT could progress from acute to subacute at a completely different rate?

A. Within that. That's why I gave a range of four to eight weeks.

Q. Six to eight weeks. So there is no person who has a DVT in which that clot could progress from acute to subacute in outside of eight weeks?

A. Obviously you never say never, never say always. But general clinical presentation --

Q. You have no --

THE COURT: You're interrupting him.

THE WITNESS: Yeah.

A. The general clinical presentation of this. And it is supported by when they got a subsequent ultrasound six to eight weeks later, it had changed. So there was a progression where

it was not something that I think your hypothesizing, that you could have a subacute change that could last for years. Well, we saw it at one point in time. We looked another point in time, that is about six weeks later and it's changed. So, yes, I do feel that there was a natural progression there that goes along with the clinical course I have seen for 25 years of experience.

Q. And you also testified that that blood has mechanisms that clot and unclot that are working against each other all of the time, right?

A. They are hopefully balanced. I wouldn't say working against each other. Dr. Weitz can comment more on that, I'm sure.

Q. And wouldn't that seem to suggest that clots are not necessarily following a static orderly progression?

A. There is -- if you say that you are looking at how the average clot changes, it follows a natural progression. And just like you say nothing is authoritative, this is the general thing we see.

Now, you can have a clot, as we did see in this case, that's been there for a while. And, eventually, it dissolves. So that, like water running over limestone, it can eventually break down. But that change of a clot organizing, not dissolving but organizing, is fairly consistent. Now --

Q. Is there --

A. -- again, after about eight weeks, that no longer gives me ability to kind of date it, so I can't tell you is it six months old or two years old. But, in the acute phase, and having operated on, seen clots and everything else, I am fairly comfortable with that statement.

Q. So is this progression, from acute to subacute, that almost always happens in six to eight weeks, is that established and documented in medical literature?

A. It's been something that we have discussed as working through the vascular lab is a common thing that we have seen and documented through multiple, multiple ultrasounds; yes.

Q. I'm sorry, but my question is are there medical literature publications that address this timeline?

A. I have not seen a specific -- I mean this is something from my training, in the nineties on, that we have always discussed, we have seen, and I have documented and confirmed by clinical experience.

Q. Okay. So this is what you have seen in your own personal experience, not necessarily something that has been established in clinical studies?

A. It's something that I have seen in being director, or active, or fellow in at least three different institutions, commonly discussed throughout the vascular community.

I think that you can easily come in and say these are the changes that you see. And you can go back into the lab and

you can certainly say the natural changes you see within the vein, and the clot that forms within the vein.

A. But the real problem being is that you can't go in and operate on patients, take the clot out and examine it, and then really try and do some type of dating for it. Because, A, you generally can't remove it. And, B, it's very detrimental to the patient.

Q. So let's turn to this exam that you conducted in December on Mr. El-Hanafi. Where did you conduct this exam?

A. In our office.

Q. In your office?

A. Yes, ma'am.

Q. At Mt. Sinai?

A. At Mt. Sinai Roosevelt.

Q. So was it conducted the way a normal doctor's visit happens, in that your assistant went in first, and then you went in later to complete the examination?

A. Yes. Again, because I was originally planning to see him immediately upon his arrival, but unfortunately I was tied up in the operating room. He did not travel lightly, obviously. And so we had him come in. I had my PA start with an initial assessment. She reported back to me what her assessment was. And then I said I'll be right up. And, actually, within a few minutes I was able to go up and see the patient. The ultrasound, they had done some of it, I reviewed --

Q. Stop. And I'll continue on.

So but you didn't actually see Mr. El-Hanafi arrive. He had already seen your physician's assistant. So you didn't actually see whether he had his stockings on and the physician's assistant had to take them off?

A. I did not, no. I was told he did not have his stockings on that day.

Q. By the physician's assistant or by somebody else?

A. I think by him, but I am not certain. I know that was the information given to me.

Q. But you can't remember by whom?

A. I can't remember off the top of my head.

Q. What questions did you ask Mr. El-Hanafi?

A. Basically, I asked him about his symptoms, where his pain was, what his activity level was, how he responded with the wearing of the stockings. He responded back appropriately. I said I had reviewed some of his history, and I went over some of that. And then asked for certain signs. Did he have any veins that he saw that had become large. And he pointed out to the one vein on the right aspect of his knee. I asked if he had any on his anterior abdominal wall, meaning his belly area, thinking of alternate pathways being formed. And he said no. And so we then asked how he had been doing with the stockings. He reported that since he had gotten to the point where he was getting it more consistently, he had been doing well.

Q. You didn't ask him any questions about how well he could perform certain activities?

A. I think I asked him about walking around. I didn't know what the level of activity was with his incarceration.

Q. Okay. But so you didn't ask him whether he was able to go jogging?

A. I did not ask him, specifically, whether he would go jogging. I guess I had the misconceived concept that they really don't do that.

Q. So you prepared three reports --

A. Yes.

Q. -- in preparation for this case. And you have gone over a number of those records that you reviewed. Have you reviewed the government's legal filings in this case?

A. I have not.

Q. You have --

A. I have not.

THE COURT: He said no.

Q. But you have reviewed some of the defense's filings in this case.

A. The main thing I have reviewed was the records, the hospital records. And then the ultrasonic evaluation. I think if you are referring, and this may by my own lack of knowledge base, I think there was a report. I can't remember, did you do a report summarizing my thoughts.

MR. CRONIN: I could clarify, your Honor, if you want. If my memory is correct, I believe we sent the doctor a redacted version of the defense brief, redacting everything other than the medical analysis and discussion. I am not sure if we told the doctor what that was.

We may have, I just don't remember.

BY MS. HEINEGG:

Q. So is that what you are referring to in your September 26, 2014 when you said you reviewed your response to Mr. El-Hanafi's attorneys to the Court?

A. Yes. They did send me a copy of the report.

Q. But you reviewed only the medical portions of that document?

A. The report that he -- that was attributed to him, I reviewed.

Q. But it says you reviewed the report of the doctor, and the response of Mr. El-Hanafi's attorneys for the Court?

A. I don't remember everything specific about that, I'm sorry. I mean the main thing I was focusing on was his clinical condition, report from your expert. And then, really, focusing on the ultrasonic evaluation and how his symptoms were presented.

I think there was a -- I know I read -- now, I'm vaguely remembering something that had a lot of things blacked out. But it was not something that was high on my list for

review. I apologize for not having more memory of it.

Q. So can I have you look at the government's exhibit number 1. This is the defense exhibit F, I believe. I guess that is still in front of you.

A. Yes, ma'am.

Q. And we have already discussed this, and this physician's assistant notes, which are rather brief.

THE COURT: May I interject? We have been over this particular exhibit a number of times.

MS.KUNSTLER: I have --

THE COURT: You may well have something new that you want to bring out on it. I'm concerned about the timing and whether we need to reserve time for another day to continue.

So how much longer do you think you have?

MS. HEINEGG: We could try to be done in 20 minutes, your Honor, if that's --

THE COURT: Why don't you try to be done in 10, and we'll see where we are.

MS. HEINEGG: I think 10 might be pushing it.

THE COURT: Try questioning.

Q. So turning to government exhibit number 1, would you agree, actually without looking at this exhibit, would you agree, generally, that the practitioner who actually examines the patient is in the best position to evaluate that patient's symptoms?

A. That is very dependent on time, what they have available to them.

Q. Let me clarify that. Would you agree that the practitioner who evaluates the patient's symptoms is in a better position to assess that patient than a person who reads that person's notes?

A. Yes.

Q. And so the practitioner who looked at Mr. El-Hanafi that day made a differential diagnosis of a Baker's cyst -- or rather early DVT, versus a Baker's cyst, versus another popliteal problems; right?

A. That's what it says there, yes.

Q. And in your practice, if you had made this kind of differential diagnoses, what would your next step be?

A. As the physician?

Q. As the physician.

A. I would go back and asses the patient. And by the description of normal temperature between the two, and no calf swelling between the two, and complaints of ankle pain, I would not actively pursue a work-up of a DVT at that time.

Q. Would an ultrasound help you differentiate between -- I'm sorry -- and early DVT and a Baker's cyst?

THE COURT: I think we know the answer to this. I think we have been over this ground.

MS. HEINEGG: I'm sorry, I'll move on.

Q. I'm handing you what's been premarked defendant's exhibit M. Is this a document that you reviewed in preparation for this case?

A. I don't specifically remember it, since it was a significant amount of material. But I'm sure it was in there.

Q. You believe -- you believe that you did?

A. More than likely, yes.

Q. Okay. This document is a Request for Medical Attention for Mr. El-Hanafi dated February 27th, 2011; correct?

A. That's what the date on this is, yes.

Q. And in the symptoms, he complains of in this request, are several blood clots on my right foot, a swollen vein by my right ankle, and two veins that run all of the way to the back of my knees have become dark gray, almost black, and it's extremely painful to walk.

If a person was presenting with these symptoms, how soon would you recommend that that person see a doctor?

A. Well, this actually describes more of a superficial thrombophlebitis. Because he is able to see the veins which means it is in subcutaneous tissue. He says he has a cyst in his right leg, but then several clots on my right foot, which is not part of -- the deep veins are not there. And the swollen vein on by my right ankle. That is most likely a nondeep vein, because he can see it. And because deep veins are not visible at the level of the ankle. He says he has

something all of the way up the back of his leg. Again, that's a visible vein, which means it's a superficial within the subcutaneous tissue of the skin and not within the deep compartments.

Q. So how soon do you think this person should see a doctor?

A. I really don't know the system that is allowed there. This sounds like a superficial thrombophlebitis, at worst. And if they have a medical system that a PA or something can see him and say, yes, this is a superficial thrombophlebitis, or not, it is not symptomatic of a DVT, no.

Q. So if a person's superficial veins are dilated and dark colored, would it be reasonable to think that there may be an issue in the deep vein system?

A. Generally. I mean acutely coming on like this, this is more likely a superficial venous problem.

Q. What did you do mean "acutely coming on?"

A. If he is coming in and saying I now have several blood clots in my right foot, so it sounds as if there's been a change, when someone says I now have, it means it's a change from whatever he had before. My interpretation.

Q. If you can please look at, this is the government's exhibit number four, March 11, 2011. The second page of this medical report, Under Health Problem Comments, it says: Right ankle, leg, and popliteal fossa pain.

A. On page 2 of three? On exhibit 4 page 2?

Q. Page 2, yes.
A. Health problem comments, right ankle, leg, and popliteal fossa pain.
Q. So this is a description of pain that is not, it's not specifically localized to the ankle; right?
A. That's correct.
But DVT doesn't cause right ankle or fossa pain, generally.
Q. I'm handing you what's been marked defendant's exhibit N for identification.
THE COURT: You mean to offer defendant's exhibit, M, as in Mary?
MS. HEINEGG: I do, your Honor.
THE COURT: And is there any objection? M, as in Mary.
MS. HEINEGG: And I would now ask to move that into evidence.
MR. LOCKARD: No objection to M or N.
THE COURT: Defendant's exhibit N and M are received without objection.
(Defendant's Exhibits N, M received in evidence)
BY MS. HEINEGG:
Q. And defendant's exhibit N is a request for medical attention for Mr. El-Hanafi dated May 25th, 2011; correct?
A. That's correct.

Q. And is this a document that you reviewed?
A. I believe so.
Q. And in this complaint, in this document, Mr. El-Hanafi is complaining of swelled up right ankle, he's unable to stand or walk for more than a few minutes. This problem has been recurring since my arrest one year ago in Virginia, correct?
A. That's what it says; yes, ma'am.
Q. But you don't believe that this is symptomatic of deep vein thrombosis?
A. No, ma'am, I do not.
Q. Can you describe some of the symptoms of deep vein thrombosis?
A. Generally, it can be asymptomatic. It can be -- meaning no symptoms, whatsoever. It can cause swelling, generally, below the level of where the clot forms. Those are the -- it can cause some redness, tenderness. The swelling is generally circumferential, meaning around the entire aspect of the leg. It is not going to be isolated. If the ankle is involved, generally the foot is involved. So that if you have a popliteal vein DVT, you may end up with circumferential calf swelling, swelling extending down through the ankle and on to the foot. But you are not going to have isolated ankle swelling, or ankle pain. It tends to be not really involving joints, because joints don't have the ability --
Q. Mr. El-Hanafi, himself, has not actually said anything

about joints, has he?

A. Ankle is what I would consider to be a joint.

Q. Right. But he says ankle, foot, calf, and leg?

A. Right ankle swelled up, I interpret meant the actual joint at the ankle.

Q. Okay. So what would you consider this symptomatic of, if you received this complaint from a patient?

A. My concern would be some type of rheumatological or orthopedic issue with the ankle itself, Achilles tendon. These are all things we have discussed before. But, again, if he has pain with walking but, you know, now it is more in the joint space, with swelling of the joint, one thinks of a bursitis, any type of thing that, you know, it's a minor sprain. All of these things can be in that differential. DVTs wouldn't cause isolated ankle swelling.

Q. So with these concerns that you have, what course of treatment would you take?

A. I mean I would have someone from orthopedics or someone that is more familiar with musculoskeletal issues evaluate him.

Q. Do you know if that happened here?

A. I think, eventually, he was scheduled to be seen by orthopedics. I don't, in the timeline, know if that happened or not. I was, again, looking at it from the vascular and venous side.

Q. You didn't review any records reflecting that Mr. El-Hanafi

was seen by a specialist?

A. He was not specifically seen by an orthopedic surgeon, no. But that would also depend on whether someone actually assessed his wound -- or his ankle, how significant they thought it was.

Q. If you could turn your attention to government exhibit 6. And I believe you testified that you had reviewed this record.

A. Yes, ma'am.

Q. You testified that you reviewed this record, but it was not mentioned in your report.

A. Forgive me. I did not mention every record that I reviewed specifically. I would not necessarily have called a sick call request as a separate line item on it. I think I would have mistakenly, or not, included that as part of the medical records while he was in the prison system.

Q. And in this record, Mr. El-Hanafi's complaints are pain from his right calf to his foot, pain and swelling; correct?

A. His principle complaint is pain and swelling in the right foot, can only walk on my toes due to extensive extreme pain in the ankle area. Need to see a doctor.

Q. And if you look down to about two-thirds of the way down the page, where it says where is the pain. What does it say there?

A. Right calf, down the foot.

Q. So this is not actually pain that is localized to his ankle; correct?

A. Well, when he came in, what is your problem, that's where he described it, now --

THE COURT: This is argument. We know what the document says.

BY MS. HEINEGG:

Q. Turning to government exhibit 7, this is -- I'm sorry. This one is July 6, 2011.

A. That's correct.

Q. And you didn't mention this in your report. It was actually, I think, only two of these approximately eight records that were mentioned in your report. Is there a reason that you decided to include some and not others?

A. I basically lumped many things together. I would not say a clinical encounter as something different than the health care prison records. I would go to the attorney's office and be more -- they could give me an itemized list, but this was not something I sat down and said point A, point B, point C. That was my error.

I apologize, Judge.

THE COURT: Could you prioritize your questions at this point?

MS. HEINEGG: I'm almost to the end, your Honor.

THE COURT: Okay.

BY MS. HEINEGG:

Q. On this July 6,2011 date, Mr. El-Hanafi's complaints are

that his foot has been hurting for two months, his ankle still hurts, his right leg has been swollen since he was arrested in Virginia, correct?

A. It says foot been hurting for two months, I have no injury that caused this. This is from the tight cuffs. The ankle still hurts. My right leg is swollen since I was arrested in Virginia.

THE COURT: Again, we can all read the document and we have read it before, so I think what you need to do is ask questions to elicit information from the witness, rather than read from the document.

MS. HEINEGG: Okay.

Q. Turning to defendant's exhibit G, which is government's exhibit number eight, you have already testified that you did not believe that there were any symptoms of DVT described in this document; correct?

A. Well, there is many symptoms that are described in this document. As you look at it in its entirety, I don't see a consistent complaint that one would find that would make me have a high suspicion of a deep vein thrombosis. Because, generally, the symptoms of deep vein thrombosis are constant, especially until they are under compression.

Q. But this is the date that the ultrasound was ordered, correct. It occurs on this record?

A. Yes, that's correct.

Q. So that the physician doing the examination apparently saw some indication, because as you testified earlier, you need to have, you need to see an indication in order to run a test. You can't just rule something out?

MR. LOCKARD: Objection, speculative.

THE COURT: Sustained.

BY MS. HEINEGG:

Q. This is also approximately the date on which you testified you believed that the DVT began, isn't it?

A. I said it could have occurred between four and eight weeks from the time of the ultrasound. This puts it at the longest distance from that time.

Q. And if you know, did Mr. El-Hanafi file any further follow-up requests for care after this date?

A. I have not memorized each of his requests, chronologically, I'm sorry.

Q. So after the ultrasound was ordered, it occurred two months later; correct?

A. Yes, ma'am.

Q. And I think you testified earlier that this clot-busting technology, this clot-busting therapy that you were talking about needs to happen while the clot is still fresh, right?

A. In an appropriate patient, yes. Generally, it is most effective within two to four weeks.

Q. So had it not taken two months from the time Mr.

El-Hanafi's ultrasound was ordered, he would have had an opportunity, he was deprived of this opportunity, because the ultrasound took place two months later, rather than immediately afterwards, around the time when you said the clot would be fresh.

A. Based on the clinical findings here, I would not have offered him thrombolytic therapy because the risk would have outseated the --

Q. Is there any other therapy that a person can undergo to prevent a DVT from developing further?

A. Anticoagulation, as we have discussed.

MS. HEINEGG: While Ms. Kunstler is looking, I want to note two things. We did not admit Dr. Weitz' CV today. It is already part of the record of this case. It was submitted as an exhibit.

THE COURT: Yes.

MS.KUNSTLER: We also did not admit his report. I'm assuming that those are part of what the judge will consider, anything that is an exhibit in this case is part of what the judge will consider, even if it wasn't admitted today?

THE COURT: I expect to do so, unless there is an objection.

MR. LOCKARD: No, your Honor.

MS. HEINEGG: At this point, I'm handing up what is marked defendant's exhibit O for identification.

Q. And this is another request for medical attention from Mr. El-Hanafi dated 6/23/11, correct?

A. That's correct.

Q. And in which he complains of swelling in his right ankle, foot, and calf area?

A. Still had inflammation in the right ankle, foot, and calf.

MS. HEINEGG: I would move exhibit O, defendant's exhibit O into evidence.

MR. LOCKARD: No objection.

THE COURT: Defendant's exhibit O is received without objection.

(Defendant's Exhibit O received in evidence)

Q. Dr. McKinsey, do you know what charges Mr. El-Hanafi is convicted of?

A. All I know was basically from as Dr. Weitz. I Googled it after I agreed to review. And buying watches, that's all I got.

Q. Buying watches?

THE COURT: Yes, buying watches. That was the first --

A. That's what the internet said.

THE COURT: Those were the first news --

Q. So you were aware of the general nature of the charges against Mr. El-Hanafi?

A. I guess I had a strong suspicion when I was contacted by

the U.S. Attorney's Office for terrorism, and et cetera. But I did not, once I saw, out of curiosity I looked and saw, I did not look any further.

MS. HEINEGG: If I can just have one minute, I'll be done in a moment.

THE COURT: Yes, sure.

BY MS. HEINEGG:

Q. So, Dr. McKinsey, based on the nature of the telephone call that you got from the government, you made an assumption that this was a case involving terrorism?

A. I think in the initial phone call they just asked me if I would review the records. And then, after I agreed to review them, then they divulged more and said he was being tried here. And I saw the history of it as I went through it.

Q. And just one more question. We've gone through, at length, a number of records dating from the end of, beginning from May 2010 to July of 2011. In your first report, you wrote that on July 27, 2011, the patient began complaining of pain and swelling in the calf and forefoot. Is there a reason why you chose this date to set a beginning of pain?

A. That was, when I looked at that record, that's when I was going through and seeing what he was reporting at the different times in the records I reviewed.

MS. HEINEGG: Thank you. I have nothing further.

MR. LOCKARD: No redirect, your Honor.

THE COURT: All right, thank you very much.

Doctor, you may step down.

(Witness excused)

THE COURT: Is there any further testimony?

MR. LOCKARD: Not from the government.

MS.KUNSTLER: None from us, your Honor.

THE COURT: Okay. Well, I want to thank counsel for your very careful preparation and examination.

I want to thank the doctors for your time and efforts.

Now, we don't have a date scheduled for sentencing, do we? We do. What is the date for sentencing?

MR. LOCKARD: January 20th, your Honor.

THE COURT: Okay. Do counsel anticipate any further submissions, or do I have before me everything I need for sentencing.

MR. LOCKARD: I think the last thing that the government is going to do is incorporate whatever additional recommendations for prospective care and management that have been made today, and discuss those with the BOP and see if we can get the Court an additional or supplemental report from them.

THE COURT: All right.

MR. LOCKARD: And we expect to be able to do that, based on our discussion with the BOP counsel prior to this hearing, we expect to be able to do that within a few days.

THE COURT: All right. And I think I have already made it clear that a BOP generalized statement that they can do everything necessary, is not adequate.

MR. LOCKARD: Yes, your Honor. We intend to have them address these specification recommendations.

THE COURT: Okay. Thank you very much.

MS.KUNSTLER: Thank you, your Honor. We will be -- there is a draft of it here, but we would like to prepare, or have Dr. Weitz prepare a list of his recommendations in a letter that we can provide the Court and, hopefully, also provide the BOP. And we may have a short comment on the letter from the BOP, we don't know, we have not seen it yet.

THE COURT: Very good. Okay, thank you. So we are adjourned.

(Adjourned)

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